Clinical Lecture
ON
CASES OF FAILURE OF THE HEART.

By C. HANDFIELD JONES, M.B., F.R.S.,
PHYSICIAN TO ST. MARY'S HOSPITAL.

(Concluded from p. 268).

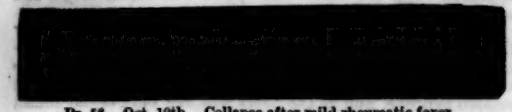
CASE 5.—R. W——, aged sixty-one, was, according to the testimony of his wife, apparently quite well and in very good spirits on the morning of his death. He ate a hearty breakfast, and walked with her from Bayswater to the Marble Arch. There he left her, saying he would overtake her immediately, and went down to the urinal. He was seen running up the steps from thence, and on reaching the fourth he fell down and died almost immediately; he was unconscious from the time he fell. A medical man who was passing by examined him and pronounced him dead. I saw him ten or fifteen minutes later, and he was quite dead then. His brother states that he was quite well, except a little deafness, when he last saw him, two days and a half before his death. At the autopsy I observed well-marked rigor mortis of the lower limbs, but not of the upper, no evident sign of putrefaction having commenced. The body was that of a robust male in good condition. No sign of violence externally. Neck short; hair black. Nothing morbid was found in the skull, except that the encephalon was soft and rather wet. In the thorax the lungs were healthy, except some old induration at the apex of the right, some adhesions, and congestion of their posterior parts. No fluid in pleuræ. The pericardium appeared normal. The heart was extremely flaccid and flabby in every part, its tissue of a pale colour and quite uncontracted. All its valves were quite healthy, but the endocardium was more or less stained by dark blood. The left ventricle was quite empty; the right contained a little blood. There was not any great amount of adipose tissue about the heart; there was some at the base, and some at the apex of the right ventricle, where the muscular tissue was almost or quite absent, and the wall of the cavity consisted almost solely of fat and of the endo- and peri-cardium. On microscopical examination, the muscular fibres of the left ventricle were well seen: they were not broken up; their transverse striæ were sometimes evident, more often not; the whole substance of the fibres was beset with more or less refracting granules, and exhibited in many places streaks of oily-looking molecules running in the course of the fibre. Acetic acid reduced the fibres to an amorphous granular mass, but did not make the oily matter more conspicuous. In the septum the change in the muscular fibres was exceedingly well marked, and also in the tissue of the right ventricle. The change in the heart was probably the granular form of degeneration; it seemed to affect every part of the organ. On repeating the microscopy after the specimens had lain in dilute chromic acid, I found that very many fibres exhibited the transverse striæ very distinctly, and appeared fairly healthy; very many also contained large streaks or patches of orange-coloured refracting granules, and many were yellow-tinted throughout their whole substance. It seemed as if the chromic acid had altered the fibres. In the first examination I noticed that, in all the specimens from the heart, numerous rod-like bodies, having more or less distinctly spontaneous movements, were seen in the water surrounding the torn-up fibres; they were seen also in scrapings from the fresh cut surface of the left ventricle, but were absent from the water used to float the specimens. These rod-like bodies—bacillaria—seem therefore to have been generated in the tissue of the heart itself. Unfortunately I am unable to say whether they existed in other organs of the body, as I had only taken home with me portions of the heart. The inner surface of the aorta, from its origin to the lower part of the thorax, was stained of a deep blackish-red colour, but the coats appeared texturally healthy, and were elastic. No fibrinous coagula were seen anywhere. The abdomen was covered by a thick layer of fat. There were old adhesions between the liver and the under surface of the diaphragm, the anterior wall, the stomach, and some of the intestines. There was softening—probably post mortem—of the splenic region of the stomach; but this viscus, and the intestines, liver, kidneys, and spleen appeared fairly healthy. The spleen was rather large and soft. No traces of irritant poisoning.

The condition of the heart in this case, as judged of by the hand and the unaided eye, was positively that of well-marked fatty degeneration. The evidence of the microscope was scarcely so positive. As the man certainly died from sudden syncope, and as the heart was the only organ found in a diseased state, there can be no question that its disease was the direct cause of death. How long this disease had lasted is a most interesting, but insoluble, problem. There can be no doubt, however, that it must have existed at the very least some days. Yet, to all appearance, it caused no subjective sensations of cardiac distress. Objective signs there must have been, as weak pulse, loss or attenuation of the first sound, and a tracing probably like those found in the preceding cases. As to the nature of the disease, I doubt whether the terms "fatty" or "granular" degeneration are sufficiently descriptive. That such a state existed there is no doubt, but whether it was the primary and essential change is, to my thinking, not so clear. The remarkable staining of the thoracic aorta in its whole length and the absence of any fibrinous coagula are suggestive of the existence of some general disease, as low fever, or, at any rate, of some blood change. If it could have been shown that the bacillaria existed only in the heart, this would have been a considerable argument in favour of the morbid process being local; but, failing this, the probability is the other way. It is tolerably certain, I think, that the bacillaria were not the result of ordinary putrefaction.

The foregoing history has a bearing on Case 3, where it is referred to, as showing how grave lesions may exist in the heart without the individual having any presentiment of his imminent danger, and without his being rendered incapable of active exertion. It is very important to bear in mind, with regard to prognosis, that in very many cases of severe illness the result is largely dependent on the validity of the heart. Given a sound organ, the patient recovers; with the reverse, he dies. The unsoundness which comes of valvular disease is not likely to be overlooked, but that which depends on latent degeneration of the muscle is very apt to be.

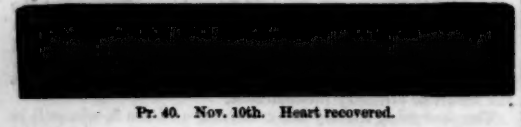
CASE 6.—E. B——, female, aged forty-two, cook, admitted October 7th, 1876. A widow with ten children. Has always had good health; never had any fainting up to present time. Taken ill a month ago with aching pains in various parts. She appeared to have a mild attack of rheumatic fever. A mixture of salicylic acid and carbonate of soda, of each twenty grains, to one ounce of water, every four hours, was ordered, and a blister to the right knee. On the 10th she felt very weak and low, but had no rheumatic pains. Pulse 92; respiration 32; temperature 101°.—11th: No pain. Bowels confined. Tongue dry and red. Temperature 102·2°; pulse 108; respiration 30. Urine light-yellow, not albuminous. Breath-sounds normal in both backs. Mind wandering. Calomel, three grains; aloes, four grains, in two pills, at bedtime; effervescent citrate of potash mixture, one ounce every four hours.—12th: Better this morning; not so light-headed as yesterday. Temperature 100·2°; pulse 96; respiration 24. Breathing easy. Urine clear, very pale, sp. gr. 1020, acid, not albuminous.—13th: Better. Temperature 100·2°; pulse 84. Heart-sounds normal. Tongue moist, brown in middle. Bowels open. No cough. Feels very sinking and feeble, but answers questions much better than she has the last two days.—At 1 A.M. of the 14th the house-surgeon found her in a state of collapse, almost moribund. He ordered brandy and milk. In the afternoon I added carbonate of ammonia, four grains; tincture of chinchona, one drachm; decoction of chinchona, one ounce, every four hours. Her lips were anæmic and presented a few purpuric spots. Pulse 100; temperature 100·6°.—16th: Tongue clean, pale at side, dry and red in middle. Feels very thirsty. Pulse 84; temperature 98·6°. First sound of heart very feeble. Pulse arrested by pressure of 250 grammes. Urine contains much allaxantine. To have two grains of reduced iron to a sufficient quantity of confection of roses in pill every third hour.—17th: No pain. Heart-sounds feeble. Pulse 104; temperature 98°. Brandy, twelve ounces.—18th: Skin of hands cold, clammy; pulse at wrist of fair force, left arrested by 206 grammes; veins scarcely visible.

Prolabia pallid, purpuric spots gone, buccal mucous membrane of pretty good colour. Sounds of heart at midsternum and apex pretty normal. Temperature 97·6°; pulse 84; respiration 20.—19th: Temperature 97·4°; pulse 80. Skin



Pr. 56. Oct. 19th. Collapse after mild rheumatic fever.

of body warm, hands cold. Both backs resonant, but breath-sounds weak.—26th: Has been improving steadily. Pulse now of good force, 90; temperature on 24th, 99°.—Nov. 1st: First sound of heart very weak, even when binaural stethoscope is used. She does not feel faint when she gets up to have her bed made. Hands fully warm and moist. Temperature 98·2°; pulse 84, of good force. No trace of alcohol found in the distillate of her urine the other day while she was taking twelve ounces of brandy daily, nor was there any smell of it in her breath. Ordered six ounces of port in place of brandy on the 30th ult.—10th: Second sound of heart loud at second right cartilage, midsternum, and apex; first sound weak. Tracing shows a marked flat top. Pulse 96, of good force, not cordy. Went out next day.



Pr. 40. Nov. 10th. Heart recovered.

Remarks.—It is not clear what was the cause of the remarkable failure of the heart's action which occurred in this patient. One view would be that fatty degeneration of the heart had existed for a length of time, though latently, and that it declared itself overtly when the system was deranged by the rheumatic fever. The weakness of the first sound is in favour of this view; but against it are the facts that no sign of failure of the heart had occurred prior to this illness, and that, as it passed away, the heart regained its former vigour, and carried on the circulation efficiently. A second view is that thrombosis of the pulmonary artery or of one of its main divisions occurred, and caused the symptoms by lessening the supply of blood to the left ventricle. Against this, however, is the absence of any notable dyspnœa or lividity of the surface, and, it may be added, the recovery. A third view is suggested by the circumstance that the articular affection disappeared rather suddenly, and was succeeded by mental wandering and a great sense of sinking and prostration, not dependent upon copious pericardial effusion or any other discoverable internal mischief. Metastasis of rheumatism to the cerebral hemispheres is not infrequent, and as the same cause so commonly affects the other constituents of the heart, it does not seem an improbable assumption that it attacked in this instance the cardiac ganglia. The delirium and collapse may thus be rationally accounted for. Had myocarditis existed, there would have been pain and probably friction sound.

With respect to the first four accompanying tracings, I am not quite satisfied that they truly represent the pulse form. Yet, as they all agree in their principal features, I have thought it worth while to append them to the cases. It will be seen that the rise in all is markedly sloping and low, that the fall is gradual, and that dicrotism is absent. The tracing is by no means that of mere cardiac debility, as in the convalescence from pneumonia, nor yet that of the exhausted heart of low fever. It indicates slow and languid contraction of the ventricle, and a similar mode of resilience in the arteries. It does not necessarily imply any want of power in the heart, for it may be present in young persons of excellent physique, in whom smart exercise renders the tracing much ampler with the same spring pressure. I have found very much the same condition in cases of morbus Brightii, and have seen it replaced after an interval of five years by the more usual form of vertical rise, flat top, and moderate dicrotism. Here the ventricle on the first occasion was probably fatigued and rendered languid by its efforts to overcome the increased resistance in the arteries. I have seen also a similar tracing in a case of aortic obstruction, and in one of aortic aneurism. Both these conditions will delay or prolong the cardiac systole.

Lecture
ON
METALLOSCOPY AND METALLO-THERAPY APPLIED TO THE TREATMENT OF GRAVE HYSTERIA.

Delivered at La Salpêtrière, Paris, December 30th, 1877,

BY PROFESSOR CHARCOT.

(Concluded from page 159.)

I WOULD remind you of what I have told you of the action of ether, which produces symptoms similar to those of an hysterical attack when the patient is still under the influence of the diathetic condition. "It seems," I said, "that ether is a reagent suitable to bring out the latent phenomena of hysteria." With metalloscopy, in the conditions I have described, you obtain a similar result. If, on the other hand, the patient is completely and permanently cured, she is no longer affected by the metallic applications to which she was sensitive before. This remarkable fact seems to result from our most recent observations, and it would form a sort of criterion, the importance of which will not be overlooked by practitioners.

I now present to you a young girl who does not belong to our wards, but who has been directed to us by Dr. Fieuzal, the well-known ophthalmologist, and who, after a set of common hysteric attacks, became affected, some four or five months ago, with hemianæsthesia and *ovarie* of the right side. She is affected with amblyopia, which, unlike what is observed in hysteric patients, is almost as marked in the left eye as in the right. Besides this weakness of sight she had lost the power of distinguishing colours, so that she was unable to continue her calling as a mercer. Dr. Fieuzal had already found out that the application of plates of gold on the side affected with hemianæsthesia caused a return of sensibility, and he sent us the patient to have our advice touching the advisability of administering gold to her internally. We found that metal appropriate. She has now been taking it for a month, and at present the little patient is able to distinguish perfectly well all the colours. The anæsthesia which affected the right side, and the hysteric fits, have disappeared. This is certainly a remarkable result, and yet I do not consider her cure to be permanently established. We have had recourse to the criterion which you know, and on applying a string of gold pieces to the patient's forehead we found, after the lapse of a quarter of an hour, that numbness was produced, whilst the perception of colours disappeared successively according to the usual order, beginning with violet and ending with blue. We will now perform the same experiment before you, and we shall witness once more the disappearance of perception of colours in a determinate order, and the other fact that when a patient is still under the influence of her diathesis you can, by applying the same metal which formerly removed the disorder of sensibility, excite the recurrence of the morbid symptoms, and thus bring out the hidden diathesis.

We have now, I think, seen enough of metalloscopy, and it is time to pass on to metallo-therapy.

We have already stated that certain hysterical patients are sensitive to applications of gold, others to copper, iron, &c. These are facts which, I think, I am able to vouch for, and to which Dr. Dumontpallier, Dr. Luys, and myself bore witness before the Society of Biology. You have yourselves seen the greater number of them. They are, indeed, most interesting and curious. We have, up to this point, studied them in relation to the diagnosis of what Dr. Burq calls "metallic idiosyncrasy." Now we have to investigate the problem of metallo-therapy, or, in other words, the treatment of grave hysteria by metals. Here we have to deal with most serious difficulties, and here there exists a difference in the view entertained on the subject by Dr. Burq and myself.

I shall not dwell on external metallo-therapy, as Dr. Burq has, I believe, a tendency to place it second in importance to

internal metallo-therapy. Besides, I have no personal experience of its value. Formerly, this was how Dr. Burq used to treat a case of hysteria. After having made out that the patient was sensitive to a given metal he placed every day plates of this metal on different parts of the body, so that the patient resembled some knight of the middle ages covered with cuirasses and "brassards." People, at the time, amused themselves very much at the expense of this mode of treatment, and I really do not see why, as there even now exist other more singular modes of treatment, which are not condemned in the same manner. Be it as it may, this metallic application had the effect of inducing at first a slight return of sensibility; but when the application of the metal was continued this sensibility soon disappeared, and the morbid phenomena manifested themselves with increased intensity for a while. The patients complained of discomfort, numbness, and drowsiness in the cases to which I referred just now. Then, after a few days, it was noticed that the greater number of the permanent phenomena of hysteria became less intense, or even disappeared altogether. There was temporary cure, followed, after a certain time, by a recurrence of the symptoms. It was then necessary to begin again, and, after a certain number of times, a definite cure was at length obtained. The whole process might last altogether some five or six months. This was external metallo-therapy. As I have already said, I have no personal knowledge of this method, not having applied it myself, and not having had occasion to test its therapeutical effects.

And now as to internal metallo-therapy. Having practised metalloscopy, and having determined the particular metal (gold, copper, zinc, iron, &c.) to which the patient is sensitive, metallo-therapy consists simply in administering the said metal internally to the patient. Most generally a soluble form is employed. Thus, with gold, we have made use of a solution of chloride of gold and sodium, containing one-fifth of a grain of the salt to twenty-five drops of liquid. It is a solution of a beautiful yellow colour, transparent, with no bad taste, and which patients take very willingly. We administer ten drops before each meal in a quarter of a tumbler of distilled water. The doses are increased progressively, and we give no other remedy. If the patient has been found sensitive to copper, it is to acetate of copper in a solution with distilled water, and given in drops, that we have recourse; or else we employ the natural mineral water of St. Christau, which, as you know, contains copper. If sensitive to zinc, in like manner sulphate of zinc is administered; if to iron, one of the numerous preparations of that metal.

What is it that takes place after the administration of metals internally? When M. Burq spoke to me of internal metallo-therapy, and said that he cured diseases by giving metals internally, I simply said, "Perhaps so; we shall see." I like to keep aloof as much as possible both from the arbitrary scepticism which too often arises from pedantic ignorance, and from that *naïve* credulousness which characterises the "charcoal-burner's faith," as the Germans sometimes say. It is between these two reefs, which are equally dangerous, that the observer must know how to steer. If anyone came to me and said he cured cancer, without of course neglecting the use of caution, I should give him access to my wards in the Salpétrière, where there are such a great number of unfortunate women labouring under that cruel affection. This is precisely the determination which I took in respect to M. Burq, when he affirmed that he held in his hands the efficacious treatment of hystero-epilepsy. I offered him the opportunity of proving the value of his method on four women affected with this disease, who had been admitted into this establishment about ten years ago, whom I had shown a great number of times in my lectures, and whose pathological history was known to a great many very competent professional brethren. In a word, they were typical cases for a test, being affected with the gravest and most inveterate form of hystero-epilepsy. Out of these four patients M. Burq found three sensitive to gold and one to copper. To the three who were sensitive to gold we gave, following out strictly the previsions and desire of M. Burq, a solution of chloride of gold and sodium; to the one who was sensitive to copper we administered this metal, first in the form of oxide of copper in powder, and afterwards in the form of eau de St. Christau. This took place in the month of July last. I was then busy with my lectures at the School of Medicine. The holidays then came without my giving any particular attention to these patients, except for the purpose of ascertaining that they were taking their drugs and were not the worse for it. When I resumed my service in the month of October I began to study them more closely, and I must declare that I felt—not surprised, as that would have been contrary to the declaration of principles which I made just now—but really moved to see that these four patients, whom I had selected myself as the most severe cases, were most remarkably benefited, to say the least. Must this result be put down to the credit of the treatment followed out? Is it merely a fortuitous coincidence? Therein is a difficulty of appreciation which we often meet in the problems of therapeutics. I shall not otherwise occupy myself with the solving of the question. I shall content myself with placing all the facts before you, and you will judge for yourselves.

Amongst the four patients who will successively pass before your eyes three are extremely ameliorated, but must still, I think, be considered to be under the influence of the hysteric diathesis, as metallic applications have still the effect of producing in them the *ensemble* of symptoms, to which I have called your attention, and which may be denominated *metallic anæsthesia*; I mean, that under the influence of applications of the particular metal which formerly restored temporary sensibility and muscular strength, these patients will become numb, drowsy, and insensible. As to the fourth patient, if it be true that we may, as I said before, take metallic anæsthesia as a criterion, she is to be considered as entirely cured. She was formerly sensitive to copper, and now, after having been successfully treated with sulphate of copper internally, she has entirely ceased to be sensitive to the application of plates of that metal, which formerly threw her into a marked condition of "metallic anæsthesia."

I shall now present these four patients to you, and we will repeat the principal experiments upon which is founded the doctrine of metalloscopy. Please remark the terms in which I express myself. I do not desire for the present to take any decisive part in respect to internal metallo-therapy. I do not judge it. I give you the means of judging for yourselves, by showing you the patients, and by indicating the circumstances under which they were treated. In order to affirm positively the efficaciousness of internal metallo-therapy very many more experiments are necessary; but I cannot help declaring that, in my opinion, the facts observed are worthy of engaging the attention of medical men.

First, here is M——. It is she who, during her severe fits, would assume such extraordinary "passional" attitudes, and whom I have often employed for the purpose of showing the method of magic-lantern projections, which a great many of you have witnessed. She was affected with hemi-anæsthesia and *ovarie* of the left side. I have known her now for eleven years, and I assert that during that protracted number of years she never ceased to be hemi-anæsthetic and amyosthenic on the left side. I always took her as a type to show my pupils the hysteric phenomena on which I had insisted in my lectures. I used to run a long needle through her arm, to show what degree of anæsthesia she had attained, and never once did the experiment fail to prove her utter insensibility. Before her metallic treatment she was very thin; she scarcely ate, and had not menstruated for three years. She commenced to take gold in July, and after a few days she began to experience the effects generally produced by the internal administration of this medicine. The first effect is an increase of appetite, which becomes voracious. This in itself would be a very desirable result if it only lasted. But there soon supervenes a certain fatigue, a feeling of heat in the stomach, of itching in the skin, and restlessness. The best thing to do in these cases is to suspend the use of the drug temporarily, and to resume it after a time. In this patient the effect on menstruation and nutrition has been remarkable. The menses have returned and are now regular. She has gained flesh, and has even grown fat. Her fits have not disappeared completely, but have diminished in number and intensity. But the most striking phenomenon is the disappearance of anæsthesia from the left side. This disappearance has been permanent for the last three months. It is true that it shows itself again in some degree after her attacks. But whereas the anæsthesia was formerly constant, it now only returns at intervals and after the convulsive fits, and it does not last more than one or two days. She is still under treatment. The application of gold develops very rapidly, and in a marked degree, the phenomena of "metallic anæsthesia."

Here now is B——, who presents a less marked and less inveterate case of hysteria, but still one belonging to the order of hystero-epilepsy. She has been hemianæsthetic and subject to major attacks for three years. This patient was affected with right hemianæsthesia, and, at the same time, as is the rule, with right *ovarie*. She presented in a marked degree all the classic phases of the attack—epileptoid period, contortions, "passional" attitudes, final delirium. The patient was submitted to the internal use of copper in July last. Under its influence the anæsthesia and the fits have quite disappeared. The external applications of copper, which formerly threw the patient into that particular state which I have described to you, are now without any action on her. Is the cure complete, definitive? From all that precedes, I am inclined to think it is. Has it been produced by the action of copper? I leave it to you to decide.

Here is another patient sensitive to gold. I have known her to be hemianæsthetic in the left side for the last six years. As usual, she had left *ovarie*, and very marked hystero-epileptic fits. She was subjected to treatment with gold at the same date and in the same manner as our first patient. At present she has but very rare attacks. Hemianæsthesia never manifests itself but temporarily, for a few hours, and only after the attacks. The application of gold on the left side of the body causes a recurrence of what I call the phenomena of "metallic anæsthesia."

The patient I now show you is B——, in whom you have been able to study a most striking example of hysteric contracture. She has been diseased the last eleven years. She is affected with two distinct diseases, hystero-epilepsy (hysteria major) and real epilepsy. It is the combination which is usually called "hystero-epilepsy with distinct attacks." The internal administration of gold has produced no modification in her epilepsy. But it is not so with the symptoms of hystero-epilepsy. After the administration of gold, exhibited in the same manner as in the preceding cases, hemianæsthisia, which for the last eleven years had persisted, has disappeared, and the hystero-epileptic fits, which were very frequent and complete, have now become very rare. Yet they exist, and have survived anæsthesia; consequently the patient is still, in a somewhat marked degree, under the influence of the diathesis. The other day she had a fit, after which supervened contracture. But the contracture lasted only seven or eight days, whereas before the treatment it generally lasted one or two months. I will add that the anæsthesia, which formerly occupied the whole of the right side of the body, has shown itself after this attack only in the right lower limb, where the contracture had first developed itself.

These are the four patients that I had to show you. I leave these facts to your own appreciation. As to myself, I shall content myself with briefly drawing this conclusion, that the question is deserving of careful investigation.

Before concluding I must state that you may meet with cases, though rarely, in which hysteric patients are not sensitive to any known metal. I must also add that in the patients I have presented to you, and in whom a metallic idiosyncrasy has been found, the application of the suitable metal is without any effect when it is made at the time of the great attacks, or, if the word can be used, of the hysteric tides. You must choose a period of calm, in order that the action of the metals may be brought out in full relief.

Such are the principal phenomena of metalloscopy and metallo-therapy which I wished to bring before you. I am desirous, however, to acquaint you with an episode which is not wholly irrelevant to the principal subject of this lecture, though it is not connected with hysteria.

Hysteric hemianæsthesia is not the only form of hemianæsthesia which may be modified by appropriate metallic applications, contrary to what Trousseau may have believed formerly, and to what Dr. Burq himself believed even quite recently. This has been shown by the results obtained in two of our patients affected with cerebral hemianæsthesia (I mean with involvement of the superior senses—vision and smell), consequent upon an organic lesion of the brain, which had produced simultaneously post-hemiplegic hemichorea. In those two patients the insensibility was absolute, and dated eleven years in one (R——), and in the other from her infancy, or about fifteen years (P——). A metallic application of iron in R——, and of gold in P——, has had the result of rapid and complete re-establishment of general and special sensibility. This result has not been altered for fifteen months, when the applications were commenced. I may just remark that in neither of these patients there exists the slightest trace of an hysteric diathesis. One is a woman of fifty-five, very calm, almost apathetic. The other is aged twenty-four, and is much more docile than the majority of patients of her age in my wards.

One word more before concluding. I wish to refer to the attempts made to elucidate the *physical* fact which must be the condition of the *physiological* action of metals. In the first place, M. Regnard has shown the important fact that extremely weak currents of electricity produce exactly the same effects as metallic applications. However, it would be, perhaps, inaccurate to draw the conclusion that metallic applications exert an action by determining currents. Such is the opinion of M. Romain Vigouroux, who has conducted a series of experiments upon the subject, and has deduced therefrom quite a regular theory of metallo-therapic phenomena. But I have no time to dwell longer upon a subject in connexion with which, besides, nothing definite has been yet done.

ON THE MYDRIATIC PROPERTIES OF DUBOISIA MYOPOROIDES.

BY JOHN TWEEDY, F.R.C.S.,
CLINICAL ASSISTANT AT THE ROYAL LONDON OPHTHALMIC HOSPITAL.

WITH AN ACCOUNT OF ITS GENERAL PHYSIOLOGICAL ACTION.

BY SYDNEY RINGER, M.D.,
PROFESSOR OF THERAPEUTICS AT UNIVERSITY COLLEGE, AND PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, LONDON.

IN the early part of December last I received from my friend, Dr. G. Fortescue, of Sydney, a small quantity of extract of Duboisia myoporoides, an indigenous tall shrub, growing plentifully in the forest lands of Eastern Australia, and supposed to belong to the order Scrophulariaceæ. Dr. Fortescue having learnt first from Dr. Joseph Bancroft, of Brisbane, and, subsequently, from his own observation, that the extract, when locally applied to the eye, is a powerful and rapid pupil-dilator and paralyser of the accommodation, was kind enough to suggest that I should make some experiments, similar to those which I recorded in THE LANCET of June 9th, 1877, on Gelsemina. Without delay, therefore, I began the experiments upon the eye, but as I was told that the physiological properties of duboisia were unknown, I was glad to share the extract I had received with Dr. Sydney Ringer, who undertook to discover these properties by means of physiological experimentation upon the lower animals, and then upon man. I shall first give Dr. Ringer's report, and then add an account of my own observations.

I may here remark that last week I had the pleasure of making the acquaintance of Dr. Joseph Bancroft, at present on a visit to this country, who told me that he had related the circumstances under which he came to discover the mydriatic properties of duboisia, in a paper read before the Queensland Philosophical Society last October. I have thought it proper to append a brief summary of Dr. Bancroft's interesting paper.

REPORT ON THE PHYSIOLOGICAL ACTION OF DUBOISIA MYOPOROIDES, BY DR. SYDNEY RINGER.

Wishing to know something of the botanical relations of duboisia, I wrote to Professor Oliver, of Kew, who informed me that "Duboisia belongs to the group of Salpiglossideæ, which occupy a position intermediate between Solanaceæ and Scrophulariaceæ. Now, however, it is definitively referred to Solanaceæ, notwithstanding its (duboisia's) didynamous stamens. It is indigenous in New South Wales, Queensland, and New Caledonia."

This information naturally suggested that its alkaloid is probably similar, if not identical, with atropia. My investigations confirm this surmise. Thus I find that, like atropia, duboisia dilates the pupil, dries the mouth, arrests the secretion of the skin, produces headache and drowsiness. It also antagonises the effect of muscarin on the heart, and after

some days excites tetanus in frogs. As the drug came with an established reputation as a pupil dilator, I was content to make only two or three confirmatory observations.

I next tested its action on a large Cyprus cat, injecting six minims of an aqueous solution of the extract (1 in 5) under the skin of the back. In fifteen minutes the pupils began to dilate, and in twenty minutes they were very widely dilated and quite unaffected by light. The mouth also began to get dry in fifteen minutes, and in twenty minutes it became quite dry, so that the cat's cry was very feeble. This was the only effect of the drug, with the exception perhaps of slight general weakness. Forty-one hours after the injection the mouth was still rather dry and the pupils still dilated, though less widely.

I then tested its action on two men, injecting subcutaneously half a grain and one grain respectively, and obtained marked physiological effects, most marked with the larger dose. In both the pupils became widely dilated and the mouth dry. After the larger dose the man's throat became so dry that he could scarcely speak. The dryness lasted five hours. Both men became rather sleepy in about fifteen minutes after the injection, the drowsiness lasting about two hours. The man with the larger dose complained of some general weakness, and both men suffered from headache, lasting about three hours. After the larger dose the pulse rose from 66 to 120 per minute.

These observations therefore proved that, whether topically applied or administered internally, duboisia dilates the pupil. Given internally, it also greatly dries the mouth, quickens the pulse, causes some muscular weakness, drowsiness, and headache—the same symptoms that follow atropia.

The next point to determine was whether duboisia, like atropia, would check perspiration. Accordingly I injected one-third of a grain of nitrate of pilocarpine (jaborandi) under the skin of a patient with non-febrile phthisis. In three minutes his face flushed, and perspiration and salivation began. In four minutes the perspiration was so free that beads of sweat stood upon the face. Nine minutes after the pilocarpine I injected three minims of the solution of extract of duboisia (1 in 4)—i.e., three-quarters of a grain. Seven minutes after this injection the skin was quite dry, and the mouth less moist. In ten minutes the man complained of dryness of the mouth, and the pupils began to dilate. In twenty-five minutes the tongue was quite dry at the end. At this time he was sleepy. Next morning—that is, nineteen hours after the experiment—the mouth was still a little dry and the pupils dilated. This experiment, therefore, proved that duboisia checks perspiration, and it confirms the previous conclusion that it dries the mouth and dilates the pupils.

I next tested whether, like atropia, duboisia antagonises the action of muscarin on the frog's heart. I divided the spinal cord of three frogs opposite the occipito-atlantal membrane, and passed a peg into the cavity of the skull, destroying the brain, and at the same time preventing hæmorrhage. I then exposed the heart of these brainless frogs, and applied to the auricles and sinus venosus a small quantity of an alcoholic extract of amanita muscaria (muscarin), given me by Dr. Michael Foster. In the first experiment, in four minutes after the application of muscarin, the heart beats fell from 31 to 6 per minute. I then applied a minute quantity of extract of duboisia (1 in 2). In thirty seconds the beats rose to 28 per minute, and greatly increased in force. Ten hours after the heart still beat well at 40 per minute.

In the second experiment, the effects of the muscarin were different. As is sometimes the case, instead of slowing the heart, it affected the frequency very slightly, but weakened the strength of the contractions very considerably. Thus, after the application of muscarin the heart's beats fell from 34 to 26, and at last beat so feebly that the pulsations could only just be seen by careful examination with an oblique light. At this time I applied to the auricles and sinus a small quantity of extract of duboisia. In one minute the beats were stronger, and in four the heart beat excellently at 30 per minute. Five hours afterwards it still contracted vigorously at 24.

In the third experiment, the muscarin reduced the beats from 32 to 14, and made them so weak that only the slightest detectable movement remained. I then added a small quantity of extract of duboisia, and at first all contraction ceased; but in two minutes the heart was very distinctly beating, and in three minutes it was contracting normally at 30 per minute. In five hours' time it beat feebly at 26.

These experiments show that, like atropia, extract of duboisia antidotes the action of muscarin on the frog's heart.

In still another respect duboisia acts like atropia. On Jan. 15th I injected hypodermically four minims of a solution of the extract (1 in 2) into a frog weighing thirty grammes. This produced some general weakness, from which the animal recovered. In forty-eight hours I found the animal slightly tetanic—that is to say, its movements were rather stiff, and when tapped in the back all the limbs were slightly jerked and then became stiff, and the toes were widely expanded. To prevent the tetanus becoming painful, I then divided the cord and destroyed the brain. I injected two other frogs with the same proportionate dose, but produced no tetanus. It is interesting to observe that whilst duboisia is, as it were, on the outskirts of the order Solanaceæ, and has many affinities with scrophulariaceous plants, its active principle, if not identical with, is very similar to, atropia.

It will be seen from Dr. Ringer's elaborate report that the physiological action of the extract of duboisia is apparently identical with that of atropia. The same remark applies to the effects of the local application to the eye. If there be any difference, it is that duboisia is more prompt and energetic than atropia, and certainly very much more so than the strongest extract of belladonna. Wishing to observe the effect of the undiluted extract, I placed a small portion of it on the conjunctiva of the lower lid of a damaged eye (Dec. 14th). Severe smarting and profuse lachrymation immediately followed, but scarcely any congestion of the conjunctival vessels. The smarting passed off in two or three minutes, but the lachrymation continued for about a quarter of an hour. In ten minutes the pupil was dilated, but not fully, although it did not get larger afterwards. The accommodation was also greatly impaired, but to what extent I could not determine.

After this the extract was diluted with twenty parts of distilled water. This solution seemed to produce more rapid and complete dilatation than the undiluted extract, and did not cause smarting and but little watering of the eyes. The resulting dilatation of the pupil usually lasted from six to ten days, and the concomitant paralysis of accommodation, which in every instance became rapidly complete, about three or four days; it then gradually subsided, so that about five to seven days after the application the accommodation was as strong and active as before. The pupil in all cases was affected sooner and recovered later than the accommodation.

Having satisfied myself that the extract is a quick and powerful pupil-dilator, I wished to ascertain more clearly the rate and amount of its action upon the accommodation, and for this purpose I determined to use my own eye. I first carefully tested the state of vision, and found that I could read No. 1½ of Snellen's type distinctly from 4 in. (nearest point) to 21 in. (farthest point) and V = $\frac{4}{9}$. I then placed a single drop of a solution of the extract (1 in 20) within the lids of the tested eye. A little lachrymation followed, but no smarting. Exactly ten minutes afterwards the pupil began to dilate, and the sight became rather misty for near objects. When once started, dilatation proceeded very rapidly, so that fifteen minutes after instillation the pupil was widely dilated, and the nearest point had receded to 10 in. In twenty-five minutes 1½ Snellen could not be read at any distance by the unaided eye, and the accommodation was therefore, for all practical purposes, completely paralysed. By more elaborate tests I discovered that the effect of the extract went on increasing for four hours, when it attained its maximum. Twenty-four hours afterwards there was no appreciable amelioration, either in the pupil or in the accommodation, but within the next twenty-four hours the effects began to pass rapidly off, so that forty-eight hours after the instillation I could see 1½ Snellen from 5½ in. to 21 in., although the pupil was not much smaller. In seventy-two hours, by an effort of accommodation, 1½ Snellen could be seen at 4½ in., and the pupil was rather smaller, and reacted slightly to light. From this time the accommodation became stronger and more active every hour, and the pupil gradually diminished until it reached its natural size. Four days after the application the accommodation was restored, and three days later the pupil was active, and of its normal size.

I could not at any time detect any change in the actual or relative strength of the extra-ocular muscles.

Experience having shown that the application of the

extract was not likely to be harmful to the eye, I resolved to employ it in all cases in which atropine was indicated. I have therefore used it largely in injuries and diseases of the cornea, in iritis, in spasm of accommodation, and whenever it has been necessary to paralyse the accommodation. Its action has in all instances been beneficial, and in some cases I have been tempted to believe superior to that of atropia.

Subjoined is a brief account of Dr. Bancroft's experiments with extract of Duboisia myoporoides, which he was led to employ at the suggestion of Baron von Mueller, for the elucidation of some investigations on "pituri," a stimulating narcotic chewed by the natives of Central Australia. Pituri is, it may be observed, now referred to Baron Mueller's Duboisia Hopwoodii.

Dr. Bancroft found the effects of the subcutaneous injection of the duboisia extract on dogs and cats were as follows:—"Dogs and cats walk about in a helpless, blind manner, falling over the least irregularity of surface, and struggle, in the case of the dog, to get through and over all sorts of impassable obstacles. If let alone they go to sleep. They seem blind, or nearly so, with a widely dilated pupil." Some of the fluid extract, applied locally to the eye, caused wide dilatation of the pupil in a few minutes. The mydriatic properties of the duboisia extract were confirmed by Dr. Thomson, of the Brisbane Hospital; by Dr. McIntosh, of the Ipswich Hospital; and by Dr. Fortescue, of Sydney. The latter gentleman found that, after two drops of watery extract of duboisia had been instilled into a healthy eye, the pupil was widely dilated in ten minutes, and the accommodation completely paralysed in thirty minutes. "Four days after instillation the effect of accommodation had practically gone off, though a considerable mydriasis remained, and some slight dazzling and uncertainty of vision for three or four days longer."

Dr. Bancroft states that he has given duboisia in asthma and in photophobia. In man, he says, it causes much dilatation of the pupil and indistinctness of vision, also confusion of intellect, particularly at night, a thirsty dryness of the throat, and loss of taste.

Harley-street.

SOME

STATISTICS OF ANTISEPTIC OPERATIONS IN THE YEAR 1877.

BY RICHARD BARWELL, F.R.C.S.E.,

SURGEON TO CHARING-CROSS HOSPITAL.

THE whole theory of bacterial influence on organic matter, as also the very term *contagium vivum*, contain subjects of so much importance from almost every point of view, that even those persons least interested in scientific investigations must have felt that a doctrine of vast influence in economic, social, and sanitary matters had here become opened out. But more especially in my own study—that of surgery—does this teaching seem of such paramount importance that clear ideas upon the subject and its bearings in all directions ought as soon as possible to be attained. One of the clearest expressions on certain essential points was given in the address of Dr. Roberts at the Manchester meeting of the British Medical Association—thus: "*Organic matter has no inherent power of generating bacteria, and no inherent power of passing into decomposition. Bacteria are the actual agents of decomposition. Bacteria owe their origin to parent germs derived from surrounding fluids.*"

These theorems, directly deducible from carefully planned experiments, carried on by a number of thoroughly trained and excellent observers, appear to me as well proven as any facts in the whole range of science. But we must nevertheless remember on what a very limited form of organic fluid these experiments have been made—viz., upon liquids which contain in suspension or solution, or both, organic matter, not only dead, but in which every trace of life, every germ capable of setting up organic action, has by the most minutely careful procedures been rigidly excluded. The experiments, then, render certain that organic matter thus treated cannot undergo a peculiar change until life-spores be added from without. But they prove nothing in regard to living organic fluids containing, as all such fluids do, innumerable cells, nuclei, and germs. Therefore such experiments leave us in absolute doubt as to whether organic tissue, fluid or solid, undergoing interstitial death or other change, is absolutely dependent for power of zymosis or putrefaction upon bacterial inoculation.

I might point to several pathological facts—among them Billroth's discovery of "cocco-bacteria" in closed abscesses—which seem to support the idea that such actions, even the production of bacteroid forms, may, in living tissues, take place independently of external inoculation; nevertheless I prefer for the present to avoid the expression of either belief or disbelief in what may be termed the doctrine of self-infection, especially since the proposition as above stated is theoretical only, and the phenomenon itself must be quite exceptional. But in a practical point of view the subject is of great importance; it is one that cannot be decided by theoretical arguments, nor even by the behaviour of such lifeless fluids as form the subject of mere physical experiment. The question as to whether tissues and fluids still forming part of the living body, but exposed to the air, are or are not capable of undergoing certain ferment-like changes leading to inflammatory evils, if that air be deprived of living bacteroid germs, can only be determined by direct experiment on the living human body itself. As a contribution to the number of such experiments—only feasible in the operating theatre—I offer a list of all the operations performed by me under antiseptic conditions at the Charing-cross Hospital.

TABLE OF ANTISEPTIC OPERATIONS IN THE YEAR 1877.

Amputations.

	Description.	Initials.	Date of Operation.	Date of Healing.	Remarks.
1.	Middle third of thigh	B. W. ...	April 19th ...	April 28th ...	Stump sound and hard on May 11th.
2.	,, ,, ...	A. C. ...	Aug. 24th ...	Sept. 2nd ...	Stump quite hard on Sept. 12th.
3.	Lower third of leg	J. T. ...	March 21st...	April 2nd ...	Stump hard on April 17th.
4.	,, ,, ...	M. V. ...	Aug. 9th ...	Aug. 26th ...	Stump hard on Sept. 20th.
5.	,, ,, ...	A. B. ...	May 3rd ...	May 12th ...	Stump hard on May 18th.
6.	Above malleoli	— ...	Aug. 31st ...	Sept. 8th ...	Stump hard immediately.
7.	Chopart's amputation	T. T. ...	Nov. 11th ...	Nov. 18th ...	Flaps washed with a 5 per cent. solution of carbolic acid, and dressed with terebene.
8.	Pirogoff's amputation	J. C. ...	Aug. 24th ...	Sept. 4th ...	

Excision of Joints.

	Description.	Initials.	Date of Operation.	Date of Healing.	Remarks.
9.	Of knee	H. E. ...	Dec. 16th ...	Jan. 10th ...	Bone appeared to join by immediate union, as the synostosis was formed, on Jan. 16th.
10.	,, ...	S. H. ...	April 5th ...	April 23rd ...	Firm synostosis in May.
11.	Of ankle...	A. S. ...	Feb. 26th ...	March 15th..	Firm fibrous bond.
12.	,, ...	E. T. ...	April 20th ...	—	Wound looked well for ten days, then inflamed; death from tubercular meningitis.

Osteotomy.

	Description.	Initials.	Date of Operation.	Date of Healing.	Remarks.
13.	Section of femur	C. G. ...	Dec. 2nd ...	Dec. 20th ...	Drainage-tube left in unnecessarily long; firm union a month after operation.
14.	,, ,, ...	R. B. ...	Jan. 25th ...	Feb. 4th ...	Rapid firm union.
	,, tibia and fibula ...		March 15th..	March 21st..	
15.	,, femur	E. C. ...	May 3rd ...	May 8th ...	In all four cases union rapidly took place; got about in middle of May; fell down and re-fractured right thigh about an inch and a half above section.
	,, femur		May 3rd ...	May 10th ...	
	,, tibia and fibula ...		April 12th ...	April 16th ...	
	,, tibia and fibula ...		April 12th ...	April 18th ...	
16.	,, femur	L. B. ...	Sept. 3rd ...	Sept. 8th ...	Perfect union in three weeks.
17.	,, right tibia & fibula	E. B. ...	Nov. 26th ...	Dec. 3rd ...	Perfect union in fourteen days.
	,, left tibia & fibula		Dec. 1st ...	Dec. 8th ...	

Excision of Loose Cartilage from Knee.

	Description.	Initials.	Date of Operation.	Date of Healing.	Remarks.
18.	Excision of one cartilage ...	J. S. ...	June 21st ...	June 27th ...	Wound healed rapidly and well; patient developed acute symptoms of an abdominal malady, from which he had previously suffered, and left the hospital still ill.
19.	,, ,, ...	L. S. ...	Feb. 15th ...	Feb. 19th ...	No inflammatory symptoms.

Deligation of Arteries.

	Description.	Initials.	Date of Operation.	Date of Healing.	Remarks.
20.	Of brachial	L. L. ...	Feb. 10th ...	Feb. 20th ...	Operation wound healed in five days; suppuration in palm continued.
21.	Of radial	A. C. ...	April 18th ...	April 22nd ...	Operation was on lower third of vessel.
22.	Of right subclavian	R. W. ...	Aug. 14th ...	Aug. 21st ...	Case reported to the Medico-Chirurgical Society.
	Of right carotid			Aug. 23rd ...	
23.	Of right femoral	O. M. ...	Nov. 22nd ...	Nov. 27th ...	
24.	Of right subclavian	L. G. ...	Dec. 6th ...	Dec. 10th ...	
	Of right carotid				
25.	Of right subclavian	J. K. ...	Dec. 6th ...	—	Died; never recovered the anæsthetic, but remained cyanotic (slow asphyxia).
	Of right carotid				
26.	Of left carotid	C. A. ...	Oct. 14th ...	Oct. 29th ...	
27.	Wound for stretching brachial plexus	C. L. ...	April 20th ...	April 26th ...	

These cases are not few and exceptional, selected out of a number of less successful ones, but are all the important operations in which some form of protection was used.[1] They show a uniformly good result with three exceptions, No. 12 dying of intercurrent cerebral disease, No. 18 being attacked with abdominal malady, No. 25 not recovering the anæsthesia. Of these it is only necessary to say here that the fatal issue has nothing to do with the operation wounds, nor with processes occurring in them or the vicinity. Excluding these exceptions the recoveries have been very rapid, the wounds healing at once without either inflammation or suppuration, and with barely any pain. I would not be supposed to state that equally rapid healing may not occasionally be attained in unprotected wounds, but such cases are rarities such as are shown as instances of wonderfully quick recovery, whereas in protected wounds results like those above shown can be reckoned upon with all but absolute certainty.

The period of complete convalescence, not mere wound healing, is very short after amputation of the thigh and leg; the stump is hard and sound in twenty-two and in nineteen days respectively. Deep wounds, as those down to the carotid or subclavian, or as those dividing bones, are soundly healed in from six to eight days. Pain after the first few hours is all but absent; there is no wound fever, no drain on the constitution, so that the patient gets up with all his powers unimpaired. But even if we include in the mortality of the thirty-three operations such cases as died from events unconnected with operation, my table, though it embraces a number of very severe cases, gives the low rate of six per cent., but if death from extraneous causes be excluded my mortality is absolutely *nil*. Thus, although living fluids may be capable of developing bacteroid forms independent of atmospheric infection, it seems certain that a particular bacterial poison, that form which Dr. Burdon Sanderson named some time ago "pyrogen," is not produced in wounds properly protected. This fact must modify profoundly the death-rate of operations, give to surgery the highest attainable safety, and to patients the greatest possible comfort.

[1] In two cases of amputation—viz., Nos. 7 and 8, the flaps were washed with a 5 per cent. solution of carbolic acid, and dressed with terebene.

One further point I must briefly allude to. It will have been seen by the table that operations for tying arteries have fallen largely to my share. All those vessels were tied with catgut; all arteries in amputations, &c., have been ligatured with the same material, nor has it been found unreliable. I propose shortly to return to this subject.

EXOPHTHALMIC GOITRE AND DIABETES OCCURRING IN THE SAME PERSON.

BY WILLIAM O'NEILL, M.D., M.R.C.P. LOND.,
PHYSICIAN TO THE LINCOLN LUNATIC HOSPITAL.

SOME little time ago a patient, suffering from Graves's disease and diabetes, was under my care; and as a case of this kind must have some points of interest, I need not apologise for publishing it.

The patient, Mrs. T——, aged forty-two years, was the wife of a respectable tradesman in easy circumstances, and the mother of five children. Her health had been rather delicate for the last twelve years, and two years ago her state attracted the attention of herself and family, and caused them some uneasiness. She began to suffer from palpitation of the heart, excessive thirst, inordinate appetite, and from increasing debility and loss of flesh. It was then noticed for the first time that her eyes were larger and her throat fuller than natural. It was also noticed that her temper, which had been always even and amiable, was becoming excitable and irritable. These symptoms had gradually increased down to the time of my first seeing her.

The patient, who presented the symptoms of Graves's disease in a typical form, was rather tall and thin, and spoke in a weak, hoarse voice. Her complexion was a dusky white, with a slight blush of red on the cheeks. The eyeballs were large, clear, and brilliant, and protruded so much that when she attempted to shut the eyes the lids did not meet, and

when she slept they were partly open. The right eye was the larger and more prominent of the two, and both presented some conjunctivitis about the insertion of the recti muscles. The patient became gradually short-sighted, and when she looked at several objects, at a moderate distance, in succession, the effort caused fatigue and a flow of tears. On examination with the ophthalmoscope, nothing abnormal could be seen in the ocular media, excepting a few congested pulsating vessels. The whole thyroid gland was greatly hypertrophied, the right lobe much more so than the middle and left, and the entire organ felt firm and elastic, and afforded to the touch a strong expansive impulse and a purring thrill. The arteries in the neck were greatly enlarged, and pulsated visibly, and they and the gland, when the patient was excited, throbbed violently. The veins of the neck were also enlarged and distended, and ramified over the front of the neck, especially over the gland, one vein running downwards and inwards, from right to left, was conspicuous from its great size. On applying the stethoscope to the thyroid, two sounds could be heard; a loud, interrupted blowing arterial murmur, and a continuous venous hum. A loud arterial murmur could also be heard below each clavicle. There was in the precordial region increased area of dulness, and a faint bellows murmur could be heard over the base of the heart. The patient was extremely nervous, and suffered from paroxysms of palpitations of the heart, which were frequently brought on from slight causes, and during their continuance she felt violent throbbing in the neck, great fulness of the eyes, and a sensation of choking as if her "heart was in her throat." The pulse was small and weak, and permanently accelerated, ranging from 120 to 130 during repose.

In addition to the preceding symptoms, which are pathognomonic of exophthalmic goitre, the patient also suffered from diabetes in a marked form. The skin was harsh and unperspiring, the lips were red and puckered, the gums were spongy and receding, and the mucous membrane of the mouth and tongue was red and presented an apthous eruption. She complained of the parched state of her mouth and throat, of thirst which tormented her, and of great flatulence and constipation of the bowels. The appetite was remarkably good, and yet she said she lost flesh and strength from day to day. She had some difficulty in retaining her urine, and was obliged to rise several times in the night to void it. The quantity passed in twenty-four hours was about fourteen pints, and presented the usual characteristics of diabetic urine. Its specific gravity was 1035. On examination it was found to contain a large quantity of sugar. The patient was much depressed in spirits, and gave utterance to her conviction that she had not long to live. Her ankles were œdematous, and the catamenia were present after eight months' absence.

I will give a few dates which will serve as landmarks in the course of the disease.

Nov. 11th.—Mrs. T—— had only made slight improvement to this date. She had not been as particular as she should have been in abstaining from food which contained sugar.

24th.—The patient had improved very much since the 11th. She was cheerful, and able to take a little out-door exercise, and to attend to some of her domestic duties. The sight had improved, and the eyeballs were not quite so prominent as they had been. The thyroid gland was a little smaller and firmer, and its purring thrill and pulsations, as well as the pulsations of the vessels in the neck, were not so marked as formerly. The pulse ranged from 100 to 120, and the œdema of the ankles had disappeared. The symptoms referable to the diabetes were also more favourable. The appetite was not so great as heretofore, and she had hardly any thirst; the urine had fallen as low as five pints, and the bowels acted regularly. She had been firm in abstaining from saccharine food.

Dec. 11th.—The patient, who could now take a fair amount of out-door exercise, had increased in weight and looked considerably better, and felt stronger than she had done for several months. Her symptoms had also made favourable progress. The prominence of the eyeballs had become daily less, so had the size of the thyroid gland, and the palpitations were not nearly so severe or troublesome as they had been. The arterial and venous murmurs could still be heard over the gland, and the pulsations and throbbing in the neck were still visible. Pulse about 100. The appetite had become natural, and she had very little thirst. The amount of urine passed in the twenty-four hours was about six pints, its specific gravity 1030.

Jan. 12th. — The patient had steadily improved till Jan. 5th, on which day, after exposure to cold whilst out walking, she was attacked with bronchitis, soon followed by profuse expectoration of blood, which rapidly reduced her strength, and although the bronchitis was soon relieved, and the hæmoptysis stopped, she never rallied. She lost her appetite, and the urine became scanty and turbid; severe attacks of nervous excitement also set in, with violent palpitations of the heart. Lastly, the stomach became so irritable that no nourishment could be retained, and, the prostration becoming more profound, she died yesterday evening, retaining her mental faculties to the last.

I regret that no post-mortem examination could be obtained. If there had been one, it might have thrown some little light upon the case. In its absence it is difficult to form an opinion as to whether the diabetes and the exophthalmic goitre were the results of the same morbid lesion, or were merely distinct and separate maladies running their courses in the patient without any pathological connexion between them. Exophthalmic goitre is a rare disease, but it is rarer still to encounter it in conjunction with diabetes, which is also not a very common affection. The combination of the two diseases, however, is believed by some to be of frequent occurrence, and it has been remarked to me that when exophthalmic goitre is said to occur alone it is often because the diabetes has not been sought for. I myself have seen four cases of exophthalmic goitre, including the one under consideration, and although I have repeatedly examined the urine of the other three, with the result of finding albumen in two of them, I never found sugar. I am inclined to think, then, that although exophthalmic goitre may be occasionally complicated with diabetes, it is not a common occurrence.

Since the time that Dr. Graves first brought exophthalmic goitre prominently before the profession it has been a subject of considerable interest to physicians, and various hypotheses have been adduced in order to give it a "local habitation and a name," and in explanation of its symptoms. The opinion expressed by Dr. Stokes that "the disease is originally a neurosis of the heart, and probably of the cervical vessels" is the one most favourably, I think, at present received, and is probably, for the most part, true. But on looking at a case of this kind one is almost persuaded to believe that the thyroid gland may have something to do either with the production or the continuance of the affection. I have noticed that the severity of the constitutional symptoms was in direct proportion to the size of the gland, and *vice versâ*. Besides the enlargement of the gland, which is an enlargement *sui generis*, and not like the hypertrophy of ordinary bronchocele, the symptoms in connexion with it point it out as not only the seat of diseased action, but also, I think, as a morbid entity capable of influencing the constitution at large. In this patient the great activity of the circulation in the neck and the rich supply of blood sent to it presented a marked contrast to the weak and small pulse in the extremities, showing the scanty supply sent to those parts. In health the heart sends, with equal force and with the greatest impartiality, an adequate supply of blood into all parts of the system; but in well marked cases of exophthalmic goitre this impartiality is departed from, and the thyroid receives more than its due share. The thyroid exemplifies in a remarkable way the old aphorism, *Ubi stimulus ibi fluxus*, for it seems to be the seat of a *vis à fronte* which attracts to it with an irresistible force so large a quantity of blood, that in consequence the other parts of the body are deprived of their natural supply, and, as a result, the constitution suffers accordingly.

The enlargement and prominence of the eyes are also caused, I believe, by a similar state of things occurring in and about them as takes place in the thyroid gland. Some occult force or active process of nutrition attracts to the parts an increased flow of blood, causing not only enlargement of the eyeballs, but also hypertrophy of the orbital tissues, which hypertrophied tissues push forward the eyes, thus producing exophthalmos. Complete protrusion of the eyeballs doubtless sometimes occurs. Last year I had a lady patient whose left eye was completely pushed out of the orbit, I was told, during the straining efforts of violent vomiting. At the time she had been attended by an irregular practitioner, and from some cause the eyeball was not returned for more than a day. When I saw the patient, a fortnight afterwards, the sight was irretrievably lost, and the eyeball had shrunk considerably within its natural dimensions.

The bruit de soufflet heard at the base of the heart, in the case of Mrs. T., was not caused by valvular lesion, but in all probability by the impoverished state of the blood, and the slight hypertrophy of the heart which existed was the result, I think, of the increased action to which it had been so long subjected, increased action leading to increased nutrition, consequently to increased bulk or hypertrophy.

In reference to treatment, the patient was put on a diabetic regimen, and cod-liver oil and a mixture composed of iron and digitalis was prescribed for her. For a month she took iron in one form or other combined with digitalis, with only slight benefit. On November 11th the iron was omitted, and arsenic, belladonna, and muriatic acid were substituted for it. This mixture she continued to take with the greatest benefit, and with only a few slight interruptions, till the 5th of January, the day on which she caught cold. The pulmonary attack was quickly subdued, and the bleeding was soon arrested by astringents. Stimulants were had recourse to, and when the stomach became irritable she was given nutritious enemata. The bleeding from the lungs, while it lasted, was very profuse, and rapidly reduced her strength. Pulmonary attacks and hæmorrhage I have found, in my experience, to be not unusual complications in Graves's disease. In this case, when but least expected, bronchitis set in, and was instrumental in carrying the patient off at a time when the two diseases from which she was suffering were running side by side, *cum pari passu*, a rather favourable course.

Lincoln.

CASE OF ULCERATED ENDOCARDITIS.[1]

By ARTHUR W. FOX, M.B.,

PHYSICIAN TO THE EASTERN DISPENSARY, AND BELLOTT'S (MINERAL WATER) HOSPITAL, BATH.

On Dec. 1st, 1876, I was consulted by C. A——, a married man, aged twenty-six, a shoemaker by trade. He complained of palpitation and shortness of breath. He was a man of fairly muscular build, rather above the middle height, and of brunette complexion. About eleven years ago suffered from acute rheumatism; since then had several subacute attacks of the same. During the last eleven years frequently vomited blood; this had lessened in severity since his marriage, five years ago, but hardly a day passed without his expectorating blood to some slight extent; his wife noticed that in the morning his pillow was invariably stained with blood. Seven years ago had swelling of feet and legs. Always steady in his habits; never had syphilis. His father died of phthisis, and a brother of heart disease, the result of acute rheumatism.

I found, on examining his chest, the following conditions:—Heart's apex beat well defined, situated in sixth interspace, nearly an inch to the left of the vertical nipple-line; impulse heaving, no appreciable thrill; deep cardiac dulness, vertical extended from upper border of third left costal cartilage to liver dulness, transversely on a level with fourth rib from right sternal edge to a point an inch external to nipple-line. On auscultation a loud prolonged blowing systolic murmur, completely masking the second heart-sound, was audible all over the chest, front and back, and was propagated into both carotids, the point of its maximum intensity being in the mitral area; there was no epigastric impulse, neither had he pulsation or fulness of his jugulars; his radial pulses were of equal volume, about 80, small, softish, and regular. There was no œdema of his ankles. His other systems were normal. Under treatment with iron and small doses of digitalis he considerably improved, so that I lost sight of him until Jan. 11th, 1878.

On Jan. 13th he had been in his usual health, excepting a slight cold. On the 14th he drove over to Corsham, near Bath, to a meeting of the hounds, from which he returned extremely fatigued. On the 15th he felt chilly, complained of nausea, vertigo, and a feeling of utter prostration. His wife gave him some castor oil, which acted several times.

On the 14th I was sent for, and found him dressed and sitting in a chair; he looked stupid and heavy; his cardiac physical signs were the same as when last seen; the percussion-note was rather high pitched towards the posterior base of the right lung, but the cardiac murmur completely obscured the lung sounds; his breathing was a little hurried; no subjective dyspnœa; no complaint of pain anywhere, or feeling of palpitation; his tongue was dry, red, and slightly furred; felt thirsty; no appetite; bowels loose; urine very scanty, containing nearly one-sixth albumen; no blood. There was no increase of hepatic or splenic dulness; his pulse was 120; temperature 101° Fahr.

On the 17th, at 1 P.M., he was in bed, lying on his back; countenance heavy and obtuse; pupils widely dilated and sluggish to light; speech thick and indistinct; tongue dry, edges and anterior third red, the rest of dorsum covered by a brownish fur. When told to put out his tongue, kept it protruded; had to tell him twice to put it back; had been delirious during the night, and vomited his milk and brandy; anorexia and thirst; bowels very loose, a stool every two or three hours; passed more water. Pulse 144, small, soft, slightly irregular; temperature 104·6°.

On the 18th, at 1 P.M., there was increasing stupor; face turgid; speech unintelligible; difficulty of swallowing; tip of tongue protruded to edge of teeth; pupils as in last report, only more inactive; bowels open every two hours; there was no alteration in his cardiac physical signs, nor was there any apparent increase of splenic dulness. Pulse about the same as yesterday, only more feeble; temperature 101·6°; skin perspiring. I was unable to detect any rheumatic or pyæmic smell in his perspiration. At 9.30 P.M. I saw him again; he was semi-comatose; there was complete motor paralysis of left arm; he occasionally raised his right hand towards his head; his pulse was almost imperceptible; his skin covered with a profuse perspiration. He became completely comatose, and died at 11.15 P.M.

The autopsy was made, thirty-six hours after death, on January 20th, in my presence, by Mr. E. Field, resident physician at the Royal United Hospital, to whom I am indebted for the following notes:—Male patient, aged twenty-six. Body well nourished; rigor mortis marked. Brain examined before the rest of body: dura mater tense; general fulness of vessels; beneath the dura mater, on each side of the vertex, was effused blood; this was more the case on the right side; beneath the arachnoid, on the lateral and inferior surface of the right temporo-sphenoidal lobe, was a large clot, the size of a hen's egg; in each lateral ventricle there was a considerable quantity of blood; it was impossible to make out what vessel or vessels had ruptured; the basal ganglia were healthy.—Lungs: Lower lobes of each engorged and rotten, but not consolidated; no infarctions.—Heart: Pericardium adherent by old firm adhesions; weight of heart twenty-two ounces; left ventricle enormously hypertrophied, but not apparently dilated; aortic orifice narrowed to size of small button-hole; mitral orifice thickened and aperture a little constricted, only admitting two fingers with ease; round the aperture on the auricular surface was a ring of ulcerations, with a few soft recent vegetations; aorta and pulmonary artery reddened. Blood very fluid throughout body. Liver normal. Spleen large, very soft; several infarctions at the surface, rather cuboid than wedge-shaped, pale in colour, and surrounded by a patch of congestion. There was only one kidney, and that on right side, weighing eight ounces and a half, scattered over the surface, where a number of small dark spots, which, on section, were found to be the congestions round infarctions, similar to those in the spleen; capsule slightly adherent at parts; kidney otherwise healthy.

Remarks.—From the patient's previous history of a chronic cardiac lesion, the acute nature of his last illness, the extreme degree of prostration, the marked rapidity of pulse, the pyrexia, head symptoms, and diarrhœa, I expressed the opinion that he was probably suffering from ulcerated endocarditis—the endocarditis maligna of Virchow. According to Rosenstein, in his article in Von Ziemssen's "Cyclopædia of Medicine," this terrible disease generally assumes two distinct types, the typhoid and pyæmic, from each of which there are of course numerous shadings. Apart from these there have been cases very like rheumatism, in which articular pains were a prominent symptom, also cases with symptoms precisely similar to cholera, and cases of jaundice, such as Lancereaux has reported. The similarity between the typhoid form and enteric fever is often extremely close, there being meteorismus, diarrhœa, enlargement of the spleen, and in some cases roseolar and petechial spots on the skin. There is, however, a higher degree of rapidity of pulse and an absence

[1] Paper read before the Bath Pathological Society.

of the temperature curve usually met with in enteric fever. In fact, the temperature curve may be stated to present no special character. Rosenstein alludes to a case where it assumed the "inverse type." A great aid to the diagnosis of the disease will be obtained where there is such an alteration in the percussional and auscultatory signs as to lead one to infer that acute changes are taking place in the cardiac valves. Unfortunately, in some cases there has been an entire absence of all physical signs of cardiac mischief, and the same with regard to precordial pain and palpitation. In the case of C. A——, during his last illness he never made any complaint of either pain or palpitation, though repeatedly questioned by me on the subject; neither was there the slightest variation in his cardiac physical signs during the whole of the time that he was under observation. His cerebral symptoms are striking features in the clinical record of his case, and are fully accounted for by the massive hæmorrhage found after death, which corroborates Rosenstein's statement that the brain displays pathological results which are directly attributable to endocarditis, and that extravasations into the meninges have been repeatedly observed, sometimes confined to the surface and at other times penetrating deeper, occasionally into the cerebral substance itself.

Bath.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

EMPYEMA COMPLICATED WITH PNEUMONIA; REPEATED ASPIRATIONS; RECOVERY.

(Under the care of Dr. GOWERS.)

THE following case, treated by Dr. Gowers, while in temporary charge of Sir William Jenner's wards, and for the notes of which we are indebted to Mr. Boyd B. Joll, M.B. Lond., house-physician, is of extreme interest on account of its somewhat rare complication and of its favourable progress.

Samuel C——, aged thirty-seven years, a coachman in London and suburbs for eighteen years, and necessarily much exposed to the weather, but of temperate habits, was always strong and healthy until Nov. 5th, 1877, when he had several rigors, followed by profuse perspirations. He soon took to bed, complaining of severe shooting pain in the left side of the chest, and urgent dyspnœa. He was seen by Dr. Miller, of Norwood, who kindly supplied the early notes of the case.

On Nov. 6th, his state was as follows:—He was a strong, tall, muscular man, with a florid complexion. Temperature 100·2° Fahr.; pulse 96; respiration 80, short and panting. He was sitting up in a chair, complaining of great distress in breathing; felt he was dying from suffocation; had acute pain and tenderness in the left hypochondrium; his expression was anxious in the extreme. The chest was large and well-formed; expansion deficient on both sides, especially the left; breathing weak over left base; no friction; breath-sounds otherwise normal; heart-sounds weak; cardiac dulness not increased. Diaphragmatic pleurisy was diagnosed.

The above condition remained unaltered for three or four days. On Nov. 11th dulness was detected over the left base, extending upwards for three or four fingers' breadth; breath-sounds bronchial; respiration 60 per minute; pulse 108; temperature never exceeded 101°; there was slight jaundice. Calomel was administered.

On Nov. 18th friction-sound was noticed at end of inspiration about half way up the back. Dulness reached to the spine of the scapula. The cardiac dulness extended across beyond middle line and upwards to third interspace in front. Pneumo-pleuritis, with considerable effusion, was diagnosed. The feet were œdematous, and the presence of about a quart of fluid in peritoneum was suspected. The patient continued much the same, with slight improvement, till Nov. 26th, when the cardiac apex beat was noticed in fourth *right* interspace about one inch and a half to right of the centre of sternum. The patient then began to sweat; the dulness became more pronounced; the breath-sounds were weak and bronchial at left base; and the vocal fremitus and resonance were greatly diminished. At the middle of the left back a strong ægophonic twang was heard. Over the right back there was hyper-resonance on percussion, and the breath-sounds were exaggerated. The fluid had disappeared from peritoneum, and the legs were less œdematous.

On Dec. 1st he was worse. Sweating and dyspnœa were increased. Calomel, acetate of potash, digitalis and squills were administered without effect.

On Dec. 4th he was still no better. There was more sweating and faintness. Much emaciation. Patient lay on left side. Fourteen ounces of fetid pus were drawn off from pleural cavity with aspirator antiseptically. No air was admitted. Hearing much relieved. Thirty hours after operation cough came on, with expectoration of fetid pus, mixed with glairy mucus.

On Dec. 8th he was removed to University College Hospital. On his admission he was suffering from severe dyspnœa, and was considerably exhausted. His temperature was 100·2° F.; pulse 104, moderately full and strong; respiration 50 per minute. The movements of the left side of the chest were almost absent below. There was absolute dulness on percussion, as high up as the third rib in front, across the middle line to the right border of the sternum, and behind it extended as high as the spine of the scapula. The heart's impulse could be felt in third interspace on the right side of the sternum. There was an entire absence of breath-sound and of vocal fremitus over the area of dulness. From the third rib in front to the first rib there was an area of hyper-resonance, with absence of vocal fremitus and respiratory murmur. The right side of chest was hyper-resonant throughout, the breath-sounds harsh and exaggerated, and accompanied by numerous moist bubbling râles. The patient had a frequent loose hacking cough, with abundant muco-purulent expectoration, which was not fetid. Next day the symptoms became more grave. Respiration became 80 per minute; pulse 120, and much feebler. He was in great pain and anxiety from want of breath, and had a tendency to syncope. A large-sized aspirating needle was inserted just below the angle of the left scapula, and twenty-two ounces of very fetid and offensive pus were withdrawn. This gave immediate and considerable relief to patient, who shortly after slept for two or three hours. Paracentesis was performed on Dec. 10th, at 2.30 A.M. and at 10 A.M. Temperature fell to 99·4° F.; respiration to 36; and the pulse to 106. The other treatment pursued since admission was the administration of six grains of carbonate of ammonia to one ounce of infusion of chinchona every six hours, and half an ounce of brandy every two hours.

On Dec. 12th the breathing was a little more difficult. Aspiration was again done near the same spot as before, but only about two ounces of pus and a dark-coloured fluid were removed. This gave some relief. After the first aspiration distant but well-marked tubular breathing became audible over left back from base to spine of scapula, dulness less in degree over scapula, and vocal fremitus was felt over area of dulness except at base. After the second aspiration there was distinct relief; the expectoration became less in amount and not so purulent. Temperature kept about 100°. Cyrtometric tracing showed a difference of three inches and a half in the circumference of the two sides in the nipple line, the right being twenty inches and the left seventeen inches and a half.

On Dec. 20th the condition was better and somewhat stronger. The breath-sounds were only faintly heard below the angle of the scapula. Temperature 99·4°; respiration 44. On Jan. 1st it was thought there was a reaccumulation of fluid, and aspiration was done twice, but no fluid was withdrawn. The heart's apex was felt in the nipple-line in the fourth interspace; the sounds were much harder and stronger than hitherto. There was still dulness and absence of vocal fremitus and resonance below angle of left scapula. Breath-sounds weak, bronchial, no longer tubular in character.

On Jan. 10th the general condition was improving; there was less cough and expectoration. The breath-sounds on right side were puerile in character; over left back breath-sounds were becoming less bronchial and more pulmonary in character. A few moist râles were still audible. Vocal fremitus and resonance were well marked.

The patient got up for the first time on the 13th. There was no faintness.

On Jan. 14th the temperature was normal, and had been so for two or three days. Pulse 76, stronger; respiration 24. Dyspnœa entirely disappeared in the recumbent position. The general condition had greatly improved. Dulness over left back was much less. Vocal fremitus and resonance were almost equal on both sides. Breathing at upper part of left back was still harsh; below it was almost normal; a few moist râles were heard. Cough and expectoration were very much decreased.

On Jan. 21st a second cyrtometric tracing was made. The right side of the chest had diminished considerably in size, the left remaining about the same as before, the measurements of the circumference being respectively: right, 18¼ in., and the left 17¾ in. in the mammary line. There was scarcely any appreciable difference in the physical signs on the two sides. Both sides of the chest expanded fairly well in respiration. There was very slight dulness over the left base, with an occasional moist râle. Vocal fremitus and resonance were good. There was a slight cough and very little expectoration.

The general condition continued to improve. He had lost very little flesh. The treatment during the last week was a teaspoonful of cod-liver oil and of syrup of phosphate of iron three times a day.

The patient was discharged, to proceed in a few days to a convalescent institution at Torquay.

Remarks by Dr. GOWERS.—In the course of clinical remarks on the case, Dr. Gowers pointed out that the tubular breathing detected immediately after the withdrawal of the pus after admission, in conjunction with the history, made it certain that the lung, solidified by initial pneumonia, had remained solid, resolution not having taken place. Pneumonic consolidation is a rare complication of empyema; pleurisy which leads to empyema is commonly simple, or if accompanied with pneumonia, the latter resolves before pus is formed. In this case the consolidation of the lung constituted at once the gravest and most favourable element in the case. The gravest, because the long continuance of the consolidation in a patient whose constitutional state was such as to lead to early suppuration in the pleura, and the contiguity of the collection of pus to the solid lung, all suggested a fear that the degeneration of the pneumonic products might be massive instead of molecular, might involve the alveolar walls as well as their contents, and lead to excavation of the lung. The solidification of the lung tissue constituted a favourable element in the case because it prevented the retraction of the lung, which often leaves so wide a space between the two pleural surfaces, and renders their approximation a slow work of time. Here the removal of a moderate quantity of fluid restored at once tubular breathing over a wide area of the chest from which it had been apparently concealed by a thin layer of pus, and the pleural surfaces were probably brought at once into extensive apposition. Fortunately the resolution of the inflamed lung proceeded without any evidence of excavation; tubular gave place to bronchial, and that to vesicular breathing. The pleural surface appeared to unite; at any rate the formation of pus ceased, and the patient rapidly regained strength. On the admission of the patient the question was discussed as to the advisability of making an opening, and inserting a drainage-tube. It was decided first to try the method of keeping the pleura as free as possible from fluids by aspirating as often as the physical signs suggested that even a small quantity could be obtained, daily if need be. None was, however, to be obtained after the second aspiration, and it seems certain that no more was formed. On the admission of the patient there was evidence of some air in the pleura. The case supports the opinion, which has often been expressed, that pneumothorax, if slight, does not add to the gravity of these cases.

CHARING-CROSS HOSPITAL.

DISLOCATION OF THE ASTRAGALUS, AND FRACTURE OF THE NECK OF THE BONE.

(Under the care of Mr. HIRD.)

FOR the following notes we are indebted to Mr. Hayward Whitehead, house-surgeon.

W. W——, aged thirty-nine, a well-developed and muscular man, was admitted January 10th, 1878, he having on that day injured his ankle, by falling down three flights of stairs at the Opera Comique Theatre.

On examination the following deformity was observed. The foot was inverted and slightly extended, the inner border drawn upwards. A bony projection was found on the outer side, over which the skin was very tense. The two malleoli were very distinct, and one inch and a half in front of the outer malleolus the head of the astragalus was projecting, resting apparently on the cuboid bone. The tendo Achillis was very distinct; the patient could move his toes slightly. Under chloroform the displacement was easily reduced. On further examination, after reduction and rotation of the ankle, some loose fragments of bone could be felt in the neighbourhood of the neck of the astragalus. The diagnosis arrived at was that there had been dislocation of the astragalus forwards and outwards, and a partially comminuted fracture of the neck of the astragalus. The fracture was probably due to direct violence after the dislocation.

The limb was placed on a back splint with footpiece for three weeks, after which a gutta-percha anklet was applied.

The patient was discharged on February 19th. The fracture was perfectly consolidated, and the movements of the ankle were perfect.

ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

TWO CASES OF TRAUMATIC TETANUS TREATED BY STRETCHING OF THE MEDIAN NERVE; DEATH IN BOTH INSTANCES.

(Under the care of Mr. NANKIVELL.)

THE following notes may be advantageously read in connexion with the editorial article on the Causes and Treatment of Tetanus published in our columns on Feb. 16th and continued in our present number.

CASE 1.—F. J. N——, aged twenty-eight, an agricultural labourer, wounded the palmar surface of his left middle finger in a mangold-wurzel cutting machine on Nov. 19th, 1876. He attended this hospital for the first time on the 27th of the same month, when the wound was found to be healthy. On the 29th he reappeared, complaining of some stiffness in opening his mouth. He was at once admitted.

On admission the patient could only open his mouth slightly; his face was somewhat drawn, and he complained of pain up the arm, at the pit of the stomach, and in the back. The wound on the finger was sloughy. Ordered twenty grains of chloral three times a day.

He slept after each dose of medicine, but had a well-marked attack of opisthotonos next morning (30th) when the finger was dressed. Ordered to take the chloral every three hours.

On Dec. 1st he could open his mouth more widely than on admission; he had not altered much in other respects since the previous day. On the 2nd, while attempting to get out of bed to pass urine, his legs and back became quite rigid. The risus sardonicus was well marked, and opisthotonos came on again during the necessary examination of the finger. He got gradually worse. The opisthotonos and general spasms became more frequent, notwithstanding that the chloral had been increased.

On Dec. 5th, after consultation, chloroform was administered, and Mr. Nankivell cut down upon the median nerve close above the wrist and stretched it, pulling it both upwards and downwards somewhat forcibly. The man made a good recovery from the chloroform.

On Dec. 7th had an attack of opisthotonos in the morning, the first since the operation. On Dec. 8th opisthotonos came on once more. Ordered twenty drops of tincture of Indian hemp with the chloral. There was no opisthotonos during the night, but on the 9th, at noon, whilst in the act of turning himself over in bed, the patient died.

CASE 2.—H. J. F——, a shoemaker, aged forty-six years, applied for relief at this hospital on the evening of Jan. 9th, 1877, having fallen down and sustained a compound dislocation of the ungual phalanx of his right thumb. He was advised, as there was considerable laceration of the soft parts on the palmar surface, to submit to amputation, but he would not consent. After reduction of the dislocation he, went home. The wound progressed favourably till Jan. 17th, when pain and inability to open his mouth came on, with stiffness in the neck. The risus sardonicus was well marked, and he was reported to have had great stiffness

during the past night in the back and legs. He was admitted and ordered some chloral hydrate at once. Two hours later, the patient having had several attacks of opisthotonos and very severe general spasms, Mr. Nankivell amputated the thumb and stretched the median nerve in the same situation as in the previous case. Chloroform was administered. The patient got rapidly worse. The spasms increased in severity, and he could barely swallow or speak. He died in the forenoon of Jan. 18th.

Remarks.—Having read in THE LANCET of Feb. 16th, 1878, the interesting report of Dr. Eben. Watson's two cases of nerve-stretching in traumatic tetanus, I have ventured to publish the notes of the two patients upon whom I stretched the median nerve for traumatic tetanus long prior to the publication of Dr. Watson's paper. Like him, I was induced to try the operation from having seen an account of M. Verneuil's success, and, although my two cases terminated fatally, I do not think this result will deter me in the future from attempting some similar operation in this most fatal disease. In my patients the wounds were situated on the palmar aspect, and it was for this reason that I elected the more simple operation of stretching the median in preference to cutting down upon the brachial plexus. That the operation did some good in the first case is, I think, proved by the cessation of opisthotonos for forty-eight hours after the nerve-stretching. In the second patient the symptoms were of so acute a character that we could scarcely hope for a good result from any line of treatment. I think that if surgeons determine to operate upon the nerves in traumatic tetanus, it will be best to stretch the brachial plexus or the sciatic, instead of cutting down upon one of their branches, as being more likely to conduce to ultimate success. In conclusion, I may add that my experience differs from that of Dr. Watson in respect of the occurrence of a paroxysm on recovery from chloroform, for in my cases there was nothing of the sort.

ROYAL INFIRMARY, EDINBURGH.

OVARIOTOMY; RECOVERY.

(Under the care of Professor SPENCE.)

FOR the following notes we are indebted to Mr. T. F. Chavasse, M.B.

M. C——, aged thirty-three, married, and mother of four children, was first admitted into the infirmary February 4th, 1877, under the care of Dr. Matthews Duncan, suffering from ovarian dropsy. On February 10th she was tapped, and 250 ounces of a pale yellow-coloured fluid was drawn off. The cyst, however, slowly refilled. On April 3rd great pain was complained of in the abdomen, more especially on the right side of the umbilicus; and early next morning the patient was found in a state of collapse, and apparently moribund. By the aid of stimulants and other appropriate remedies, a revival took place. It was conjectured that the symptoms were caused by the rupture of a small cyst. A fortnight later the woman was sent home for change of air.

On July 26th she was readmitted, and, on the recommendation of Dr. Duncan, was sent down to Professor Spence's wards. At this date the circumference of the abdomen at the umbilicus was forty inches, being two inches and a half in excess of the measurement taken before tapping. A vaginal examination showed that the os uteri was somewhat patulous and lower down than normal. The fundus of the organ was retroflexed.

On July 30th Mr. Spence performed ovariotomy; 300 ounces of a dirty, almost black, fluid was drawn off from the cyst. Some adhesions to the omentum were ligatured with catgut and then divided. The pedicle of the cyst was secured by a clamp, its base having previously been ligatured with carbolised whipcord, and its free end seared with the thermo-cautery. Carbolised silk sutures were employed for closing the abdominal walls.

The dressing used consisted of oil-silk protective and carbolic-oiled lint. The cysts were two in number, the larger being nine inches and three-quarters long, and seven inches and a half broad; the smaller, with the fluid contained, was the size of an ordinary walnut. No trace could be found of the previously ruptured cyst.

The after progress of the case was all that could be desired. During the first week the highest temperature reached was 99·4° F., the pulse being at that time 104. This was the record on the evening of the day following the operation. The clamp came away on the eighth day. On the 20th the wound in the abdominal walls was healed throughout, and the patient sat up. Soon afterwards she was dismissed, wearing an abdominal belt.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Case of Amnesia, with post-mortem observation.—Anchylosis of both Knee-joints.

THE ordinary meeting of this Society was held on the 26th ult., Dr. C. West, President, in the chair. During the evening Dr. Dickinson exhibited in the ante-room an extensive series of microscopical preparations of the nervous centres from cases of diabetes. Two papers were read, which did not elicit much discussion.

The first paper read was one by Dr. BROADBENT, "On a Case of Amnesia, with post-mortem examination," of which the following is an abstract. The communication began by recalling some of the hypothetical conclusions of a previous communication, "On the Mechanism of Speech and Thought," in vol. lv. of the Transactions of the Society. Dr. Bastian's hypothesis of a special "perceptive centre" in relation with each sense was adopted and extended. It was considered that these "perceptive centres" would be situated in convolutions which received radiating fibres; and Ferrier's researches have since located the centres for vision, hearing, smell, taste, and touch in some of the convolutions into which these fibres had been traced, more particularly fibres from the extra-ventricular portion of the thalamus. It was further considered probable that the formation of a complete idea of external objects would be represented structurally by the convergence of arcuate commissural fibres from each perceptive centre to some part of the cortex not in direct relation with the crus or basal ganglia. A part of this intellectual process would be the association with the idea of a name. On this hypothesis it would be possible for a breach to be made in the channel of communication between one of the perceptive centres and the "idea centre" or "naming centre," and a case was related in which the effects producible hypothetically by a lesion between the visual perceptive centre and the naming centre had actually been observed. A patient otherwise quite intelligent could not name the simplest object at sight, or read a word of his own writing. A post-mortem examination was made. It was pointed out that a lesion, cutting off the "naming centre" from the "auditory perceptive centre," or involving the former centre itself, would produce far more complicated symptoms, since the subject would, *ex hypothesi*, not only fail to understand spoken words, but he would not know what he himself was saying. Cases were briefly given exemplifying this condition, but no examination had been obtained after death. In the case which forms the subject of the communication, and which is believed to afford another illustration, the brain was examined after death. An omnibus driver, aged forty-nine, of intemperate habits, had a fit, of which no accurate account could be obtained, about Oct. 1st, 1877. He had from that time been in the condition in which he was found on admission into St. Mary's Hospital on the 11th. He walked into the hospital, and no paralysis could be detected, except very slight paresis of the right side of the face. Sensibility, however, was defective over the entire right half of the body, limbs, and face. The striking feature of the case was that the speech consisted almost exclusively of an inarticulate jargon, in which, however, from time to time, a distinct word or phrase would be heard, such as "If you please," "Thank you," "Thank you." It was difficult to make out how far he understood what was said to him, as his replies, though mere jabber, were often appropriate so far as length was concerned, natural in tone and accent, and accompanied by natural gestures and facial expression. He would also address long speeches to those around him,

evidently making some urgent request, and he frequently ended by crying. It was obvious that he thought he was giving expression to ideas present in his own mind, but he did not recognise the fact that his language was inarticulate. It was by telling him to do something that his want of comprehension of spoken words was made apparent. His invariable response to the command to give his hand was to put out the tongue, and in one or two doubtful instances only was his action appropriate, and then he was probably directed by signs. He did not understand writing. The patient died suddenly on Nov. 6th, and on post-mortem examination softening was found involving a considerable part of the posterior half of the convex surface of the left hemisphere. The greatest depth (three-quarters of an inch) and breadth of the morbid change was seen in a transverse vertical section made at the end of the fissure of Sylvius. Here the softening reached from near the superior longitudinal margin to within an inch of the inferior and internal edge of the hemisphere. The convolutions affected were proceeding from before backwards, the supra-marginal lobule and corresponding part of infra-marginal or first temporo-sphenoidal gyrus; more deeply and in a more advanced degree the postero-parietal lobule, the angular gyrus and the first and second temporo-sphenoidal convolutions in the same place; less extensively the middle annectent gyrus and the part of the occipital lobe adjacent. The softening involved the temporo-sphenoidal lobe more completely than the parietal lobe membranes. Arteries of brain fairly healthy, of vertex opaque and raised by fluid from convolutions. No other morbid change observed. It was considered that the loss of comprehension of words, whether spoken by others or himself, and the confusion of mind consequent upon his inability to understand or to make himself understood, would account for the condition of the patient, and the interpretation was that this was due to destruction of the channel from the auditory perceptive centre to the higher centre in which the name is associated with the idea which it symbolises, or to destruction of this name-centre itself. Whether the interpretation offered is exact or not, the case is interesting as an example of the association of a certain loss of intellectual faculties with a lesion of definite extent and seat. It is worthy of attention that the left hemisphere is the one affected, and it would appear from this and similar cases that the exclusive employment of this hemisphere as the way out for language involved its use as the "way in." A comparison of the effects of lesions of identical parts of the two hemispheres would be fruitful of results.—The PRESIDENT asked whether the patient was as unable to express his ideas in writing as he was in speech; or if he could not, did he make attempts to write when he had a pen given him for the purpose.—Dr. BROADBENT said he was perfectly unable to express himself in writing, and, indeed, he held the pen in an aimless sort of way, not appearing to attempt to use it.—Mr. SPENCER WATSON had always felt there must be some fallacy regarding the idea of the one-sided function of the higher cerebral functions, and suggested that the true explanation of cases of amnesia from lesion of one side of the brain might be found in a loss of balance between the two hemispheres, just as the function of walking is disordered if one leg be injured and lost. No one would say that the function of walking resided in that injured leg.—Dr. BROADBENT said that it was no doubt a shock to all to find the function of speech limited to one cerebral hemisphere, but it seemed abundantly proved by facts. No amount of lesion in the right hemisphere would produce loss of speech—at any rate, in any but a left-handed person; whereas a very limited lesion in the third frontal convolution of the left side produced aphasia. The hypothesis of Broca and Moxon—of the education of the left hemisphere being correlated to right-handedness—involved also education in the intellectual expression of thought by means of speech, for speech is merely a matter of movement.—Dr. BARNES asked if any observation had been made on ambi-dextrous persons; was there an equal amount of cerebral development on the two sides in such individuals?—Dr. BROADBENT said that was one of a great many questions he was unable to answer.

A paper followed, entitled "A Case of Anchylosis of both Knee-joints, with shortening to the extent of two inches of the femora, from oblique and comminuted fractures," by Mr. BRODHURST. The communication described a case in which there was fracture of both thigh-bones, together with injury to both knee-joints. Shortening to the extent of two inches took place in each thigh-bone, and anchylosis followed the injuries to the knee-joints. The mode of restoring motion is related, and it is stated that motion was ultimately as perfect as before the accident; and further, it is stated that notwithstanding the shortening of the femora, the patient was not less active, whether on foot or on horseback, than before his accident.—Mr. MORRANT BAKER asked for a further description of the instrument by which these results were arrived at; and Mr. HULKE, referring to a statement in the paper that Sir W. Fergusson had pronounced the case to be one of bony anchylosis, asked whether this opinion was gleaned direct from Sir William, or only on hearsay evidence.—Mr. BRODHURST, in reply, thought the instrument was too well known to have been shown to the Society. He had now used it in many cases for several years, and it consisted in a couple of splints supporting the femur and tibia, or the humerus and forearm, with a roller placed at the elbow or ham; secondly, a wheel and axle. It was thus very powerful, and he had used it in cases of very firm adhesions in which resection had been advised, and in some cases he had used it to restore motion after resection had been performed. The first case in which he employed it was a severe and long-standing one, in which it was necessary to perform tenotomy before applying the traction. Sir W. Fergusson's opinion was communicated to him by the gentleman who was with the patient when he saw Sir William.—Mr. HULKE criticised the use of such forcible measures in subluxated joints, and in conditions where a stiff and strong lower limb was better than a loose joint.—Mr. BRODHURST contended that, in the case related, the patient, who had seen nearly all the surgeons in London, was placed in an infinitely better condition as regarded his locomotive powers after than before the operation. No one who had seen him could doubt this.—Mr. HULKE did not question the propriety of the operation in this particular case, but here there did not appear to have been subluxation, as he gathered from Mr. Brodhurst was the case in other instances in which he had employed it.—Mr. BRODHURST said he was misunderstood. In the first case in which he applied the instrument there was subluxation, and he had to remove dead bone and to divide tendons before the instrument could be used.

The Society then adjourned.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

Benign Tumour of the Lower Jaw.—Observations on the Treatment of Compound Fracture of the Lower Jaw, with notes of cases.

AT the ordinary meeting of the Association, held on Feb. 20th, S. J. A. Salter, Esq., F.R.S., President in the chair,

Mr. MAUNDER showed a Benign Tumour of the Lower Jaw, the size of an orange, involving rather more than one half of this bone. The operation was performed within the mouth, a method introduced and practised by Mr. Maunder on several occasions, so as to avoid section of important vessels and nerves. In this way no external scars result, a great desideratum in the female.

Mr. ISIDOR LYONS read a paper "On the Treatment of Compound Fracture of the Lower Jaw." After remarking that the principal objects to study in the treatment of fractures in general were—(1) that union should take place between the fragments; (2) that the fragments should be placed in apposition to each other; (3) the avoidance of deformity (by which is meant that such a displacement of the fragments of a bone has taken place that it does not present the same appearance as it did previously to the fracture),—Mr. Lyons stated that with the advance of art and science dental surgery had made rapid strides during the last few years, and especially with regard to the formation of inter-dental splints, which should be simple in construction and easy of adaptation. He would only allude to two splints—viz., that of Mr. Hammond, consisting of a single iron wire, so formed as to fit round all the teeth, and a thin one pulled through, entwining both teeth and the outer wire, a pair of ordinary pliers being the principal tool required in its manufacture. Its adaptation is easy, and very effective in cases of single fracture. The other was Mr. Gunning's splint, which is also very ingenious, although much

more elaborate, and specially adapted for those cases where there are double and triple compound fractures with great displacement. An account of this apparatus is given in Mr. Christopher Heath's work on Diseases of the Jaw. The author then proceeded to relate eight cases of fracture of the lower jaw, four of which he had treated with Hammond's splints, which had these advantages over others at present in use:—Complete immobility of the fragments; smallness in bulk; the mouth can be opened, permitting of cleanliness (a great desideratum in these cases), and also the mastication of soft food; bandages can be dispensed with, and an in-patient converted into an out-patient, who can attend to his work if necessary. In conclusion, he remarked, in the impressive words of Mr. Coleman, that, "to apply a gutta-percha splint and four-tailed bandage is to perpetuate a deformity;" and that in most cases it was an advantage to allow a short period of rest to a patient before adopting active measures to reduce a fracture.—A discussion then took place, in which the president, Mr. Coleman, Mr. Bryant, Mr. Maunder, Mr. Napier, Mr. Ranger, and Mr. Moon took part; and Mr. Lyons briefly replied.

PROVINCIAL MEDICAL SOCIETIES.

MANCHESTER MEDICAL SOCIETY.—At the meeting of this Society on Feb. 6th, Mr. BRADLEY related particulars of a case of gastrotomy.—Mr. WHITEHEAD showed for Mr. Lund a woman whose tongue he had removed with scissors. The several stages of the operation were as follows:—Chloroform was administered to complete insensibility; the mouth was kept open with Mason's gag; a ligature was passed through the tip of the tongue, and consigned to an assistant, who maintained throughout the operation a firm and steady traction outwards and upwards. The tongue was then extirpated by the simple process of cutting with scissors through all the attachments of that body to the jaw and hyoid bone. Two vessels were ligatured with catgut. After the tongue had been removed, two silver-wire ligatures were passed through the remains of the glosso-epiglottic ligaments, with the object of obtaining a firm hold on the floor of the mouth should any secondary hæmorrhage take place, and also with a view of raising the posterior floor of the mouth, so as to influence as much as possible the flow of the secretions otherwise than down the throat, by bringing the wires out of the mouth, and attaching them to the cheek with plaster. The patient made a rapid recovery, and has since returned to her home in the country.—Dr. SIMON showed a specimen of Plica Polonica, removed from the head of a Polish woman resident in Manchester. The plica dated its origin from an illness, whilst in Poland some ten years ago, during which the patient's hair had been neglected, and subsequently to which, from superstitious credulity, the tangled mass of hair had been allowed to remain. The plica was some nine inches in length, and consisted of an axial mass of débris, sparsely encircled by normal curling hairs, and covered with nits. There was no evidence to support the theory of parasitic origin, nor was separation of the plica attended by pain or oozing of bloody or other fluid. Similar plicæ had been removed from various parts of the scalp, but in other respects the patient was cleanly and her hair well kept.—Dr. ROSS related the case of a boy four years of age admitted into hospital a month ago with right hemiparesis, aphasia, and double optic neuritis. The hemiparesis passed into hemiplegia, with contraction. There was also nystagmus, progressive blindness, and temporary conjugate deviation of eyes and head to the left. The diagnosis, yet unconfirmed, is a tumour, probably tubercular, in left hemisphere above lenticular nucleus, and possibly a second mass in the left lobe of the cerebellum.—Dr. DRESCHFELD brought forward three cases of Cerebral Disease, where the lesion, seated in the anterior lobes, had produced symptoms enabling a correct diagnosis as regards localisation to be made ante mortem. He drew attention to the aids rendered by experimental pathology, and, limiting himself to disease of the cerebrum, he pointed out that diseases of the middle lobe, represented roughly on the surface by the ascending frontal, ascending parietal, and supra-marginal gyri, and in the centre of the brain by the corpus striatum, thalamus, and internal capsule, are easy of diagnosis; those of the frontal and occipital lobes being more difficult to localise. The chief points aiding in diagnosis of lesion of the frontal lobes are—1. Convulsions, with lesion near cortex, which are not preceded by an aura; short convulsive stage of clonic contractions; prolonged stage of unconsciousness. 2. Absence of paralysis of motion, or loss of sensation. 3. Certain mental phenomena, as lethargy, somnolence, and general torpor of mental functions. 4. Headache. 5. Absence of vomiting usually. 6. Optic neuritis may or may not be present. The three cases observed illustrated these points:—Case 1. A male, aged forty-eight, admitted into infirmary October 13th; had had a tumour of orbit removed without injury to eyeball, and lately suffered from epileptic fits, with deep and long-continued insensibility, and from headache. No paralysis, either motor or sensory. No optic neuritis. No vomiting. Great apathy. Died on Oct. 18th, and there was found thickening of skull about right temporal and parietal bones, and a syphiloma, size of a pigeon's egg, invading right anterior lobe.—Case 2. A male, fifty-two; similar history of convulsions. Stupor and mental apathy. No neuritis, nor vomiting, nor paralysis. Pachymeningitis of right half of dura mater. Softening of part of frontal lobe and the inferior frontal convolutions.—Case 3. Male, forty-five. Imperfect right hemiplegia. Double optic neuritis. A tumour covering the left hemisphere, involving pia mater and subjacent grey and white matter, over the middle and inferior frontal and ascending frontal convolutions.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—The seventh meeting of the session was held on February 15th, Dr. Morton in the chair.—Mr. J. S. NAIRNE read notes of a case of Obstruction of the Bowels, in which the flatulent distension was very great. The post-mortem examination revealed a stricture from organic disease at the sigmoid flexure; and an inch below the stricture a hole in the bowel. The chief points of interest were—(1) As to treatment, which consisted in injections by an O'Beirne's tube. (2) As to cause of wound, which Mr. Nairne thought had been made by the tube acting on a bowel greatly thinned by distension. The case was discussed by Drs. Thomson, Scott Orr, W. L. Reid, and others, the opinion being generally expressed that opium treatment should have had a trial.—Mr. J. L. MILLER, from Tasmania, read an interesting paper on Hydatids, of which, in a long colonial practice he had seen not a few cases. Touching slightly on the etiology of the disease, and in that connexion pointing out the facilities for the introduction of the parasite into the system in pastoral districts where dogs were so common, and men and cattle often drank at the same scanty water source, Mr. Miller mentioned that while in Victoria the parasite generally affected the lung, in Tasmania it only attacked the liver. Medicines had no effect whatever upon it, until its vitality had been weakened by drawing off the fluids when anthelmintics could be used with advantage. Puncturing was the only proper treatment; it could be resorted to without danger or constitutional disturbance, and with complete success. The fluid should be drawn off at one operation. Mr. Miller related a considerable number of cases. Dr. Scott Orr mentioned that, notwithstanding the rarity of the affection in Scotland, he had within a few years treated three cases. In one of these, though the treatment (by puncture) was eventually successful, it set up violent constitutional disturbance.

WORCESTERSHIRE MEDICAL SOCIETY. — The annual meeting of this Society was held on Feb. 7th. The report of the committee showed that the work of the Society continued, within the eleventh year of its existence, to be successfully carried on. The number of members is fifty-six. The ordinary meetings have been fairly attended. Several new standard works have been added to the library, which is now a very valuable one. Mr. Walsh was elected president, Dr. Sherlock vice-president, Dr. Strange honorary librarian, and Mr. Hyde hon. secretary. A large party of members and friends dined together at the Star Hotel in the evening.

STEWART INSTITUTION FOR IMBECILE CHILDREN.—We have pleasure in stating that at a meeting of the Managing Committee of this valuable charity on last Monday, Mr. Pascal Law attended, and handed over securities amounting to £3165, to form the nucleus of a fund for the erection of an additional wing to the new buildings which are about to be opened at Palmerstown, in the county Dublin.

Reviews and Notices of Books.

Lectures on Clinical Medicine. By Dr. MCCALL ANDERSON. London: Macmillan and Co.

THIS volume contains seventeen clinical lectures delivered to students at Glasgow. They appear to be selections from the work of several sessions. The book opens with a very interesting introductory lecture on recent advances in practical medicine, and the author then passes on to the discussion of various subjects, including spinal irritation, tubercular peritonitis, mediastinal tumours, &c. Three lectures are devoted to aortic aneurism, two of them dealing with the treatment of aneurism of the arch by galvano-puncture. Three cases of this operation are detailed, and rules are given advocating the use of a weak current from a constant battery, and the employment of needles insulated to within half an inch of the point, and attached to the positive pole only. The twelfth lecture is on acute phthisis. The account which it gives of three cases successfully treated has already excited much attention and some criticism, and the author strives hard to wipe away the doubt which some have cast on the accuracy of his diagnosis. It is to be regretted that he has not recorded his cases more clearly, appreciating even the value of stating negative signs. The first patient, for instance, has, on admission, "a tendency to diarrhœa" and "fever of a typhoid type." Although the characteristic eruption of typhoid fever may not have been present, why are we not assured that it was absent, or, at least, that a search was made for it? Lectures to students ought to be models of accuracy. We ourselves incline to the tubercular view of the pyrexia in these cases. But undoubtedly some of them admit of another interpretation, which it would be wrong to keep out of view, and which can only be excluded by the most rigid record of facts, negative and positive, bearing on the diagnosis. In Mr. Spencer Wells's case, quoted by Dr. Anderson, the tubercular disease of the peritoneum, from which perfect recovery took place, was a matter of ocular observation. But quitting the subject of exact diagnosis, the effect of the treatment of the pyrexia is instructive. Like others, Dr. Anderson has occasionally been disappointed with Niemeyer's combination of quinine, digitalis, and opium; but by supplementing this by the application of iced cloths to the abdomen, he has reduced a temperature of 104° F. to 98·2° within twenty-four hours, and has afterwards found no difficulty in preventing its undue elevation. We hope to hear more of this, and especially whether it will help us in treating the often unmanageable pyrexia of ordinary phthisis.

We have not space to refer particularly to other lectures. They are of unequal merit, and some appear to have been delivered without any case having been under observation to act as a text for the introduction of the subject—perhaps a questionable course in a clinical lecture. But the book forms very pleasant and profitable reading, and will be favourably received. The illustrations are good, and there are some well-executed charts of pulse and temperature.

Die Oeffentliche Gesundheitspflege in den Ausserdeutschen Staaten geschildert. Von Dr. CARL GÖTEL, regierungsrath in Colmar. pp. 314. Leipzig: Verlag von F. C. W. Vogel. 1878.

IN recent numbers of this journal, we drew attention to an excellent Manual of Public Hygiene, by Dr. Sander; the volume before us is on the same subject, and is one of those which has received a prize from the German Verein, or Union for the improvement of public health. It deals with the principles of hygiene in a somewhat different way from that adopted in Dr. Sander's treatise. Dr. Götel considers the various acts and ordinances that have been promulgated, first in England, and next in France, the former occupying one-half and the latter nearly the second half of the book, the references to Belgium, the Netherlands, the United States, Switzerland, Italy, Austria, and other states, being compressed into short compass. The account of English enactments, the details of which, as he says, instead of being left in the hands of local boards, too often engross the attention of Parliament, a body not at all adapted to deal with them, appear to us to be very correctly and cleverly given. He considers in succession the Clauses Acts, the Nuisances Removal Acts, the Sanitary Laws, the Public Health Act of 1875, the several clauses of which are dwelt upon at some length. The duties of medical officers of health, inspectors of nuisances, &c., are then considered, and then the hygiene of dwelling-houses, including cleansing of streets, flushing of sewers, water-supply, and the hygiene of schools, barracks, prisons, poor-houses, and permanently occupied ships, baths and washhouses, and graveyards. Foods and their adulterations are then discussed briefly, and sections on the hygiene of trades, on the care of the sick, vaccination and syphilis, and quarantine, finish this part of the book. The section on the sanitary laws of France is divided in a very similar manner. The reader has thus the opportunity of contrasting the measures adopted in the two countries. The hygiene of food is in this respect interesting. The amount and mode of overlooking in this country are known to our readers, but in France not only are falsifications more closely looked after and more sharply punished than here, but in Paris efforts were made, up to a recent period, to regulate the price of provisions, as of bread and meat. These ill-judged regulations have, Dr. Götel states, now been rescinded. The work will prove useful to all who are engaged in sanitary subjects, by giving them a clear account of the measures adopted in France for the improvement of the general health of the people. When will Spain, when will Italy, awake to the importance of attending to public hygiene?

On the Nature, Origin, and Prevention of Puerperal Fever. By W. T. LUSK, M.D., Professor of Obstetrics and Diseases of Children in the Bellevue Hospital Medical College, New York. From the Transactions of the International Medical Congress, Philadelphia, September, 1876.

NO disease is more worthy of the serious attention of pathologists, and especially of physicians than puerperal fever. Disease is always unwelcome and painful in its incidence, but it is never more so than when it comes of the process of childbirth, and tends to convert a time of new life in a family into an occasion of distress and death. Preventive medicine is never more fitly occupied than in vigilantly preserving and protecting the physiological condition of lying-in women. Dr. Lusk uses the term "puerperal fever" to cover all the febrile conditions peculiar to the puerperal state. He estimates that, in New York, there is one death in 85 confinements; and that the deaths from puerperal fever alone, excluding all other complications of the puerperal state, are one in 146 confinements. He recalls the fact that puerperal fever is, with rare exceptions, associated with some inflammatory processes having their starting-point in the genitalia; such as catarrhal inflammations of the mucous membrane of the vagina or uterus, or diphtheritic inflammations, cellulitis, metritis, local or general peritonitis, inflammation of the lymphatics and veins, thrombosis, pleuritis, pericarditis, valvular affections of the heart, abscesses, and other destructive processes in the parenchymatous organs, and purulent collections in the joints.

The author divides cases of puerperal fever into two groups. 1. The non-infectious group. 2. The infectious. This differentiation is made to turn on the absence or presence of

symptoms of blood-poisoning, these being quite or practically absent in the first group and present in the second.

As the chief causes of the first group, the non-infectious, he enumerates the following:—*(a)* traumatism during labour, especially in cases of moderate pelvic deformity; *(b)* the imprudence of patients or their nurses; *(c)* moral causes; *(d)* adhesions of pelvic organs due to an old peritonitis; *(e)* the vulnerability of individuals; *(f)* zymotic poisons. The physician is generally unable to employ preventive measures against the causes of the first or non-infectious group of cases of puerperal fever.

Coming to the infectious group of cases, that characterised by symptoms of blood-poisoning, Dr. Lusk's great conclusion is that they are of septic origin and, in varying degrees, contagious. The usual points of introduction of the septic poison are the lesions of the parturient canals. He thinks the evidence of the septic origin of infectious puerperal diseases abundant, and devotes a great part of his paper to the statement of it. He goes somewhat minutely into the relation of septicæmia and puerperal fever, and evidently regards it as very close. He looks upon the connexion of septicæmia and bacteria as established. The lesions characteristic of puerperal fever and those resulting from septic poisoning are similar. And recently, he shows, we have had abundant proof that bacteria are present in puerperal fever in the proportions and groupings found in other diseases due to putrid infection. Waldeyer, Orth, Heiberg, and von Recklinghausen found the tissues and lymphatics of the parametria filled with pus-like masses, consisting, in addition to pus-cells, chiefly of bacteria. Bacteria swarmed in the peritoneal cavity. We regret from want of space to be unable to give the results of an investigation by Dr. Steurer, of Strasbourg, at the instigation of Recklinghausen, into the pathological changes in an epidemic of puerperal fever in 1874, including the question of bacteria and their migrations.

Under the head of the causes of this infectious group, Dr. Lusk gives priority to the atmosphere of puerperal hospitals, especially of those wards in which recently confined patients are. In these wards are to be found conditions of the air favouring the multiplication of bacteria, which both cause putrefaction and serve as carriers of septic virus. Inoculation is another source of puerperal fever, generally by nurses. He finds no statistical proof of the connexion between puerperal fever and zymotic disease. For the prevention of these infectious cases of puerperal fever he recommends the adoption of Lister's antiseptic principles, and insists that, with due attention, lying-in hospitals may be made as healthy as private houses. We have expressed a contrary opinion on this subject, at length and repeatedly, in THE LANCET. The author lays great stress on the removal of patients showing febrile symptoms from the lying-in ward into another.

Bengal Medical Regulations. Part I. Regulations and Orders for the Medical Department of the British Army in Bengal Presidency. Issued by authority of the Government of India. Calcutta: Office of the Superintendent of Government Printing. 1877.

Non-official Supplement to Part I. Bengal Medical Regulations, in the form of Appendices compiled from existing Orders and Instructions on various subjects, for the use of the Officers of the Army Medical Department serving in the Bengal Presidency. Calcutta: Office of the Superintendent of Government Printing. 1877.

THESE works supply a valuable guide for the procedure of medical officers in Bengal in every department of duty, and in every rank of the service. They are of moderate size, and reference to them is facilitated by a complete index at the end of each volume. For the due utilisation and observation of the facts of epidemics, such as cholera, small-pox, &c., instructions are given which put to shame the loose way in which duty is prescribed to medical men and officers of health at home. The only omission we have noticed in a necessarily imperfect glance at the book is that of salicin and its preparations from the list of drugs to be had at the medical store depôts. The books are the compilation of Surgeon-Major Ogilvy, Secretary to the Surgeon-General at Simla. They are published, as will be seen, under the authority of the Indian Government. Works of this sort, though very valuable when accomplished and well done, as in this case, involve much dry and uninteresting labour to the compiler, for which probably his only immediate reward is that he is making a great contribution to the easy and efficient working of the medical service in India. There is yet one other advantage to the author—that he is perfecting his own knowledge of all important points in the administrative, executive, and scientific departments of the service, to be used, let us hope, in yet higher spheres of duty than those already reached.

ROYAL COLLEGE OF PHYSICIANS.

THE CONJOINT SCHEME AND THE ADMISSION OF WOMEN.

AT the meeting of the Fellows of the College of Physicians held on Friday, the 22nd ult., Dr. Elam asked for information in regard to the relation of the College to the question of the admission of women to the profession, and by what authority ladies had on several occasions attended the lectures in the College.

The PRESIDENT stated that the College possessed no power under the College charter to admit women to examination, but that Russell Gurney's Act conferred upon the College such a power if they chose to exercise it. No female had as yet been admitted to the College, and no steps had been taken by the College to prepare the way for the admission of women. As regards the effect of the Conjoint Scheme, should it come into operation, it was difficult to say what the actual result would be, for the matter had not been fully discussed. Ladies might claim to be admitted to the Conjoint Scheme, and in that case it is not clear what would occur. The College of Surgeons had, however, stated that they did not intend to confer their membership upon women candidates, and unless they possessed that title they could not obtain from the College of Surgeons a licence to practise.

Dr. QUAIN remarked that the Conjoint Scheme was formed to make regulations for the examination of men, and the question of the admission of women to the Conjoint Board examinations had never been raised by it.

Dr. PITMAN said under the proposed Conjoint Scheme no directions were given for any distinction in the sex of candidates. The words used in reference to those who might present themselves for examination were "any candidate," &c., which designation would evidently include women. If women passed the Conjoint Board they could claim the licence of the College of Physicians. He was of opinion that the College should not wait till the Conjoint Scheme had begun to work before taking any action it might think desirable to exclude women from the College. One co-operating body had already consented to admit women to medical degrees, but the only way in which candidates could reach that body (the University of London) to be examined by it, was by passing the conjoint examination, and as it is impossible to say what would happen if one of the co-operating bodies demanded that women should be admitted to the conjoint examinations, the College ought speedily to consider the whole matter. After some further discussion, a resolution, requesting the president to summon an early meeting of the College, to consider whether, under any circumstances, the College should open to women its licence to practise, was moved by Dr. Hare, and carried unanimously.

Sir JOSEPH FAYRER repeated the question of Dr. Elam as to the right of women to attend lectures at the College, and Dr. Farre explained that on one occasion a lady friend of Dr. Brown-Séquard was present at his request, and that he supposed on the occasions when ladies were present they had been admitted with the card of a Fellow.

THE LANCET.

LONDON: SATURDAY, MARCH 2, 1878.

HAVING discussed the surgical treatment of tetanus (p. 243), we now turn to the other therapeutic measures, which may be divided into medicinal and general. To mention by name one-half of the means which have been tried would more than occupy our space. External applications, whether of cold or heat; hot, cold, or tepid baths; free purgation, stimulant frictions, general or local blistering, ice to the spine, &c., have all had their advocates. Even at the present time, as may be seen from the cases we have recently published, there are some who use blisters and purging, which others strongly condemn. But of all these it may be said that they are of no proved utility, and even possibly hurtful. If we except the warm bath in some cases, it must yet be allowed that, as it can usually be applied in practice, it is likely to be harmful in the majority of cases.

Opium, cannabis Indica, chloral, curare, and Calabar bean are the medicines most commonly used at the present time. Bromides, especially of potassium, have also been employed, but not as yet largely. Until the last few years opium was the almost sole remedy, and many cases of recovery under its influence have been published, though the recorded failures are perhaps more numerous, and the unrecorded are probably in far greater number. But a careful inquiry into the cases of recovery shows that the majority were either of non-traumatic tetanus or of trismus only, without general spasm. JOHN HUNTER expressed an unfavourable opinion of its value, and stated that he had had no successful case, though one of the most completely recorded and successful cases was published by WILLIAM HUNTER in 1761. In that case, not only was there "spasmus cynicus," as our forefathers called the "risus sardonicus," but general severe convulsive spasms; opium was given in the dose of one grain every hour for some days, as well as laudanum, and with final success. But there can be no doubt that opium only quiets the general system, and its cessation is followed by rapid return of spasm, so that it has no specific effect. Nor must the difficulty in its absorption be overlooked, for we cannot expect much good when, as in a recorded case, a large number of pills are found unchanged in the stomach after death. Morphia has also been used, but the punctures for hypodermic injection are decidedly injurious, and internally it has no great advantage over laudanum. But though opiates have now fallen into disuse in tetanus, we question whether their entire neglect is justified.

Cannabis Indica was, after opium, most frequently used, and its hypnotic action, and possibly also the relief of anxiety and attention produced by its deliriant effects, were of undoubted value. But the great variety in its quality and strength is a drawback to its use, nor can it claim any great advantage over opium, save in the absence of poisonous properties.

Of the other drugs which have been advocated and largely used in the treatment of tetanus, on the ground of their physiological action, we may discuss chiefly the merits of curare, chloral, Calabar bean, and bromide of potassium.

Curare, wourali, woorara, or Indian arrow poison, is one of the poisons which, though long known, had not been used as a drug until late years. First employed in the treatment of tetanus by VELLA, it has been tried by many French and Italian surgeons, amongst whom we may mention ERCOLANI, TOMMASI, and LUSSANA, and cases have also been recorded in this country. Its use was first suggested by the complete paralysis which follows toxic doses, a paralysis which, commencing in the hind limbs of animals, extends to the muscles of the trunk and upper limbs, and involves, last of all, the respiratory muscles and the heart. It was thought that by this paralytic action the tetanic spasms would be prevented, and thus their evil results held in check. But the experiments of BERNARD, experiments which rank amongst the highest scientific triumphs of that great physiologist, showed that the action of curare was to paralyse the voluntary muscles by some action in the terminations of the motor nerves in them, whilst both the conductivity of the motor nerves and the contractility of the muscles remained unimpaired, and the sensory system was entirely unaffected. It is true that there is, as has been shown by the subsequent experiments of KÖLLIKER, VULPIAN, and others, who have confirmed and extended BERNARD'S observations, a period preceding the complete paralysis, in which there is a lowered irritability of the general motor nervous system; but this has not been completely studied. The general result, however, both of clinical experience and physiological experiment, has been to confirm the truth of BERNARD'S statement that curare might stop the convulsions of tetanus, but for all that could not cure the disease. The objections to the use of curare have been well stated by VULPIAN. The great dangers of tetanus lie in respiratory spasm and in exhaustion. Even in strychnia poisoning, where the poison can be eliminated, it has been found that curare does not prevent death unless administered before the spasms have commenced, the changes set up in the cord being incompatible with life. And in order to prevent the fatal result of the strychnia, the curare must be given in a dose sufficient to paralyse the respiratory muscles, and then artificial respiration be kept up. But in tetanus we have not to deal with a poison which is rapidly excreted; to produce any good effect we must give curare so as to paralyse the respiratory muscles, or to cause exactly such a diminished reaction that they shall not be capable of producing fatal asphyxia, and then to counterbalance this weakened action we must perform tracheotomy, and keep up artificial respiration for an unknown length of time. All the while we shall be doing nothing to control the primary irritation or the central changes induced by it. And the result of experience in cases where, of course, such a complete effect has not been attempted has been, as VULPIAN says, that curarisation has had no favourable influence upon the issue of tetanus. Practically its use is now abandoned, and rightly so.

Chloral is another drug which has been largely used, with results which gave at first great hope that the favourable anticipations formed of it would be realised. Its advantages over curare are indeed great, for not only does it diminish the attacks of opisthotonos in number and severity whilst

its physiological action is maintained, but it produces a certain amount of anæsthesia, lowers the reflex excitability of the cord, and produces a general sedative and hypnotic action upon the cerebro-spinal centres. Recent experiment has shown that the amount of anæsthesia produced by chloral is much less than was formerly supposed, that its action is mainly on the cerebro-spinal centres, and that its continued use is not without danger both from its toxic effect on the blood and its power of arresting the heart's action in some cases. But experience has also shown that in at all severe cases of traumatic tetanus it cannot be relied upon to arrest the fatal result. A large number of cases have been treated, and it is true that in many a cure has resulted, and in others the end postponed. WOOD, writing in 1875, gives thirty-three recoveries to thirty-four deaths out of sixty-seven cases treated with it, and a critical examination shows that of the recoveries many were in slight or idiopathic cases. Opinion is still divided as to its value and its mode of use. Dr. EBEN. WATSON speak unfavourably of it. Some—as Dr. MACNAMARA—have advocated it solely as a hypnotic, in a single dose at night; others, and the majority, believe in repeated doses of from thirty to forty grains; and if used alone, we think it should be given largely. We need mention only to condemn the suggested use by intravenous injection according to ORÉ's method. It must not be forgotten that chloral possesses a power of lowering temperature which may be of value in some cases, and that, if other drugs are used in addition, it may still be of great service in procuring sleep.

Inhalations of ether and chloroform find but few advocates now—their dangers and inconveniences are too obvious.

Calabar bean and bromide of potassium are the two remedies whose known physiological action promises the most favourable results. We may seek, in our treatment of tetanus, to lower the irritability of the terminal sensory filaments, to diminish the conductivity of the centripetal nerve-fibres, to lower the reflex excitability of the cerebro-spinal centres, or to arrest the transmission of motor impulses. It is obvious that in a disease which, so far as we know, depends on an excessive reflex irritability of the cord and medulla oblongata, however that may be produced, we shall most efficiently act by diminishing or controlling that irritability, and by removing also the sources of irritation and preventing its transmission. The latter we seek mainly by the surgical methods which we have already indicated, and the estimate of the use of physostigma and bromide of potassium depends chiefly on their fulfilment of the former effect. The main action of Calabar bean, as was shown by FRASER, whose experiments first led Dr. WATSON to employ it, is to diminish the reflex activity of the spinal cord. Together with this there is a rise of arterial pressure and a slowing of the heart, due, it is believed, partly to vaso-motor spasm, and partly to stimulation of the cardiac ganglia; and before abolition of reflex function is produced, there are fibrillar twitchings and contractions of muscles, the cause of which is not yet satisfactorily determined. But the use of the drug in practice has not been so successful as was hoped. ROEMER and WOOD have collected fifty-nine cases, with thirty-two recoveries and twenty-seven deaths. For some carefully recorded cases of success under the care of Dr. DICKINSON and Mr. POLLOCK our own columns may be referred to (THE LANCET, Aug. 26th, and Sept. 2nd and 16th, 1876). But much of the want of success may probably be due to the great variations in the quality of the drug, to which attention is again called by Dr. WATSON. We may hope that by the use of the alkaloid, eserine, some of this source of error and failure may be avoided; but though we believe that cases have been treated with it, we know of no recorded instance.

Bromide of potassium has as yet been too little tried to allow of any decided opinion as to its merits, but, so far as it has been observed, the results have been good, and its physiological action seems to give indications of its fitness for the disease. Its main actions are to lower the reflex excitability of the cord, to paralyse the peripheral ends of the sensory nerves, and to lessen also the activity of the cerebral centres, and thus induce sleep. To fulfil these ends in the case of tetanus, it must be given in very large and frequent doses, but this may be done with far greater safety than with any of the other drugs which we have mentioned. WOOD gives eighteen cases, of which only two were fatal, and other observers have formed an equally favourable opinion of its value, though whether his belief that of all known remedies it is the one best suited for the treatment of tetanus will be justified by experience, we do not as yet know. It certainly deserves a careful and extended trial.

Space forbids us to discuss more fully the relative merits of these various medicines. How far they are antagonistic, or to what extent they may be advantageously combined, are important questions—for example, chloral and Calabar bean have been believed to be opposed to each other. But we pass on to the more important and too much neglected question of general treatment.

Whatever special means may be employed, all are subsidiary to and parts of that which above all things is to be enforced—viz., *rest* and quiet. The occurrence and severity of the spasms are directly proportioned to stimulation, whether by mental emotion, by the slightest touch or cold draught, by a bright light, or even by slight voluntary movement. Hence the absolute necessity of enforcing complete isolation, perfect quiet, mental and bodily, an equable temperature, and, as far as possible, darkness, and of allowing no movement around or of the patient which is not absolutely essential. The "*rest*" treatment of DE RENZI appears to us not only most rational, but absolutely essential to be enforced, whatever other means of cure we may adopt. Absolute quiet in a dark room, complete isolation with only such attendance as is necessary, regular feeding with concentrated nutriment, which should be fluid and warm, at stated and not too frequent intervals, drowsiness or unconsciousness being maintained, as far as possible, continuously,—such seem to be the most rational means of cure. Nor until these have been tried more thoroughly and persistently can we judge of the value of drugs. Hospital cases suffer with especial severity because of the total neglect in most cases of these prime essentials of treatment. And it must never be forgotten that, though severe tetanus is usually rapidly fatal, it may, when prolonged by treatment, be fatal after a long interval; hence vigilance must never be relaxed so long as there is the slightest tendency to the recurrence of spasm.

THE long promised Report of the Medical Officer of the Local Government Board has at length been published. There is nothing recognisable by the uninitiated in the report which would explain why a report which refers to the year 1876 should not have appeared prior to February, 1878. The report is dated June, 1877, and we must assume that the delay in its appearance is but another instance of that unconscionable dilatoriness which has made the Local Government Board a by-word among local authorities, and which is believed to arise from the inadequacy of its staff for the proper execution of the multifarious work devolved upon it.

The present Report of the Medical Officer of the Board has been looked for with some anxiety. The position of Dr. SEATON, who succeeded Mr. JOHN SIMON in the office, was, in regard to reporting, certainly a difficult one. Most men might well shrink from putting pen to paper in continuing the series of reports begun by Mr. SIMON. He had made these reports peculiarly his own in their inimitable style, and in the range and grasp of the subjects dealt with in them. Dr. SEATON, with exquisite tact, has avoided provoking any comparison between his own work and that of his predecessor in office, and has at once taken a position consistent with the altered circumstances of the office he holds, and which is probably in strict accordance with the wishes of the head of the Department. Although Dr. SEATON has succeeded Mr. SIMON as Medical Officer to the Local Government Board, he holds his office not, as Mr. SIMON did, under a particular statute, but under appointment by the Board, and his report appears, not as an independent report, as Mr. SIMON'S reports did, but as a supplement to the Annual Report of the Board. Dr. SEATON, then, consistently with this change, has contented himself with simply giving a brief business-like account of the proceedings of the Medical Department of the Board during the first year of his stewardship, and printing in an appendix a series of selected reports made by officers of his department. The report altogether forms a volume of 320 pages, profusely illustrated, and it is not a whit less interesting or less valuable as a contribution to public health literature than the reports issued under Mr. SIMON'S signature, which have been published before. Dr. SEATON may indeed be congratulated upon his first report. The exceptional value of the Appendix compensates for the formality of his own share of the report, however much we may regret the fact that he has felt himself called upon to restrict his observations to a formal utterance.

The bulk of the report consists of various returns as to vaccination and medical inspections; of certain papers on hospital hygiene, by Mr. NETTEN RADCLIFFE; of a memorandum, by the same gentleman, on the progress of Levantine plague in 1876 and the early part of 1877; of a report, by Dr. BALLARD, on Effluvium Nuisances; and of the official memoranda connected with the Medical Department issued during 1876.

The papers on hospital hygiene include the well-known reports, now usefully brought together, on the Radcliffe Infirmary, the Norfolk and Norwich Hospital, and the Manchester Royal Infirmary. The great feature of the Report is Dr. BALLARD'S report, which forms the first part of a very extended inquiry into effluvium nuisances, and deals with those which arise from the keeping of animals, the slaughtering of animals, and those branches of industry in which animal substances or substances of animal origin are principally dealt with. A second part of the report, to be published subsequently, will deal with nuisances arising from branches of industry in which vegetable substances, mineral substances, and substances of mixed origin, are chiefly concerned. The present part of Dr. BALLARD'S report is of remarkable interest, and quite unique within our knowledge of the subject. It will form a topic for separate consideration.

THE Public Health (Water) Bill, introduced into the House of Commons by Mr. ALEXANDER BROWN and others, is designed to amend the provisions of the Public Health Act, 1875, in respect to the water-supply of rural and *quasi*-rural districts. It provides that it shall be the duty of every rural sanitary authority to see that every occupied house within their district has within a reasonable distance a supply of wholesome water sufficient for the consumption and use for domestic purposes of the occupiers of the house. It empowers the rural sanitary authority, on the report of their medical officer of health that any occupied house within their district has not such supply within a reasonable distance, and that such supply can be provided at a reasonable cost, to take specified proceedings to secure that a supply be furnished. Further, the Bill makes it unlawful for any house to be erected or rebuilt in a rural district without sufficient water-supply, and imposes a penalty not exceeding twenty pounds sterling on anyone who shall let or occupy a house in contravention of this provision. It is also provided that local authorities shall keep wells, reservoirs, cisterns, and other sources of public water-supply plentifully furnished with water; that rural sanitary authorities may make bye-laws for the purpose of regulating the mode of securing a proper supply for the houses in their district, that they shall also cause inspection to be made from time to time as to the condition of the water-supply of their district; and that urban sanitary authorities, in such parts of their district as has not been supplied with water by themselves or a water company, shall exercise the same powers as to water as the Bill proposes to give to rural sanitary authorities.

It might have been supposed that a Bill dealing with so obvious and necessary a matter as that which forms the subject of the present measure would at once command the assent of Parliament. But such is not the case. Long as the defects which the Bill proposes to remedy have been known, cruelly as they affect large portions of our population, and often as they have been brought before the Legislature, even yet the Bill is looked upon with doubt, and it must be submitted to a Select Committee before further proceedings be taken upon it. The Committee, we should imagine, must be embarrassed with the rush of evidence that will no doubt be forthcoming on the subject to which the Bill refers.

THE Army Estimates for 1877–8, which have just been issued, show a charge of £256,500 for medical establishments and services. From this, however, should be deducted about £2000 for the military establishment attached to Netley Hospital, which is quite unnecessary for any medical service, but is apparently kept up for the time-expired depôt which

is so injudiciously attached to the invaliding establishment. An analysis of the various charges gives us the following information:—

The pay and allowances of medical officers at home amount to £149,238, and in the colonies to £46,319; the pay of militia surgeons to £5600, and the allowance to private medical practitioners and medical bills to £5340 at home and £5840 in the colonies, the latter charge being chiefly caused by a sum of £5400 being taken for the Cape of Good Hope for the pay of civil surgeons employed with the colonial force in the field. The cost of medicines and instruments accounts for £19,000 at home and £4000 in the colonies, the former including medicines for lock hospitals and militia. The extra duty pay of the Army Hospital Corps and miscellaneous labour is estimated at £4188 at home and £655 in the colonies. The female nursing at Netley costs £821, and at Woolwich £546. A sum of £9700 is taken for the care and maintenance of lunatic officers, non-commissioned officers, and men in private asylums. The remainder of the vote is made up of charges for clerks, messengers, &c., and contingencies. The estimate is for the Medical Department at home and in the colonies only, that for India being included in the Indian budget.

In addition to the amount already noted, a sum of £55,621 will be required for the Army Hospital Corps, and £9070 for the office establishment of the Director-General, making a total of £321,220 for Army medical services.

THE opposition to the Dental Practitioners Bill grows stronger as the real nature and consequences of the measure become more thoroughly understood. It is as an infringement of the rights enjoyed by the whole medical profession the attempted legislation is chiefly regarded, and in that light it cannot be viewed except with feelings of aversion. Petitions are in course of signature throughout the country, and it is scarcely possible, we believe, that the Bill can pass the second reading. Our great hope now is that the promoters of this strange measure will indirectly confer an obligation on the public by provoking a Parliamentary definition of the term "Surgeon-dentist," which shall put an end to the anomaly which permits a class of persons who are not surgeons to assume that registered medical title. What would the lawyers say if a perfectly uneducated section of men who engross deeds for the profession and their clients were empowered to describe themselves as Barrister-conveyancers? Would it not be held to be an indefensible infringement of professional title? Nor would there be half the reason against this use of forensic titles which obtains against the assumption of medical titles by unqualified dentists, because the sham barrister would be detected the instant he appeared in court, whereas the pretended surgeon may practise with impunity until he loses a patient, and even then the chances are in favour of a certificate being taken from an unqualified man. The profession owes it to itself to protest in this matter, and we are glad to find that the right step has been taken, as though by common consent, throughout the kingdom. It is only necessary to guard our readers against one point. The promoters of the Bill pretend that they have removed all reasonable objection by conceding to medical practitioners the right to register. We are infinitely obliged for the privilege, but, probably, no medical man would submit to the indignity of registering, on the same list with the unqualified and advertising "dentists," around whom the law is asked to throw its protection. Medical practitioners *are* dentists by the right of their surgical diplomas. They ask no better title, and they desire no other register than that provided by the Medical Act of 1858, the full privileges and rights conferred by which they desire to retain.

Annotations.

"Ne quid nimis."

THE ARMY MEDICAL DEPARTMENT.

THE *Army and Navy Gazette* has taken up the question of the want of candidates for the Army Medical Department, but, we regret to say, has discussed it in a flippant manner scarcely worthy of its reputation. It states that "the medical papers are elated at the failure of the scheme for the Medical Department of the army." We can only say for ourselves, that so far from being elated, we deeply and sincerely regret that the "neglect, injustice, and mismanagement" of the military authorities have created so strong a feeling among the officers of the Department, that the profession generally, and the teachers in the medical schools, have felt it their duty to back them up and to advise the younger members of the profession not to join the service under present conditions. We never asserted, as the *Army and Navy Gazette* insinuates, that "the young gentlemen studying hard and walking the hospitals with the view of entering the Army Medical Department," would abandon their intention because the surgeon-majors' horse forage was cut off, but we asserted, and repeat, that this act of injustice on the part of the War Office gave rise to great discontent in the Department, and led to the medical officers strongly advising these "young gentlemen" to refrain from joining. The limited-service Warrant of Mr. Hardy is, we affirm, the greatest obstacle to candidates coming forward, as no sensible man would care to enter upon a career in which the odds are 9 to 1 against his being permitted to follow it out after he has spent the best ten years of his life in it. In our last number we stated the chief steps which, in our opinion, should be taken to restore the popularity of the Department; and to these we might add, some assurance on the part of the Government that any privileges granted with this view will not be counteracted by confidential memoranda or War Office circulars.

DISCOMFORTS OF THE SICK.

THOSE only who have passed weary days and wakeful nights in weakness and pain on a bed of sickness, with powers of endurance enfeebled, and every form of physical and mental sensibility acutely active, can comprehend the multitude and misery of the discomforts which beset the sick. Noise in its hideously infinite variety; creaking boards, which no deftly-made screw has been devised to secure; rattling china and ware, not yet replaced by ingeniously-devised substitutes—perhaps the old wooden bowl and platter on dumb waiter for food, and articles partially protected with rubber for general use: falling coals and cinders, surely preventable by the employment of wooden tongs and silent ash-pans; harsh door-fastenings, possibly avoidable by special apparatus constructed for use with locks temporarily fastened back; glaring lights, that irritate the wakeful, and make the dozing dream and start; puzzling shadows, or lugubrious darkness, evils instantly remediable if only it were possible

to secure a soft and shaded light. These are a few of the surface grievances of the first stage of illness, when the head aches, the faculties of hearing and sight are preternaturally intensified, and a morbid fancy extracts suffering and bewilderment from every disturbing circumstance, however small.

Then comes the stage of helplessness, when the sick person lies in the paralysing grip of his malady, perhaps unconscious or delirious, and those about want all the aids which skill and thought can bring to their assistance to minister to his necessities safely, promptly, and with the least distress or disturbance to the patient and his surroundings. It is seldom possible to say precisely how little or how much the surroundings of a seemingly unconscious person affect him. In this period of an illness, apparatus, contrivances, and arrangements, of every class, for the ministration of comforts to the sick, play a not unimportant part in the treatment, and should be so regarded. It is discouraging to observe the meagre results of the enterprise bestowed by designers and producers of appliances useful in this phase of sickness. For example, a thoroughly efficient feeder suitable for use in the case of an adult does not exist, and expert nurses revive the old-fashioned butter-boat. A shaded hand-lamp, of no greater weight than may be borne on a finger, and so contrived that the light will fall at the point required, without assailing the eyes of the patient, is not yet devised. Complicated and costly beds, quite out of the reach of any middle-class family, and therefore available only for the wealthy, or the fortunate inmates of hospitals, alone meet the requirement of cleanliness without discomfort. The like is true of nearly all the apparatus for the relief of pain by change of posture, and for securing immunity from pressure, or steadiness in a particular position. The rich and the poor are provided, but not the multitude in narrow circumstances with small and inelastic financial resources.

The stage of convalescence is in many respects the most trying of all. It is then that petty annoyances, such as arise from noises, draughts, smoke, foul vapours, bad or ill-managed light, improperly-cooked food, nauseous remedies administered in uncleanly and uncomfortable cups or glasses, knives, forks, and spoons that turn over with a clatter, things that fall or are readily knocked down, irritating wall-papers, hard, lumpy, or too soft, beds, burdensome, or cold, bedclothes, beds that can only be put in order with labour and confusion. There is scarcely an article or piece of apparatus for the sick chamber which is not obviously susceptible of improvement, and would not repay the thought expended upon it, if placed within reach of families with small incomes, who feel the cost of comfort in sickness. None of these matters are beneath the consideration of the medical practitioner. In no small proportion of cases they are relatively of high moment. It is neither wise nor safe to leave the care of such details to nurses, whether trained or domestic. The physician should be able to direct those in charge of the sick what to provide, where to obtain all necessary appliances, and how to use them when at hand. This is a matter of more than common importance, and it is with the view of reminding the profession and the producers of special apparatus—efficient and inexpensive,—of the conspicuous part their enterprise should play in minimising the discomforts of the sick, we bring the subject under notice.

PURE PATHOLOGY.

ONCE more we must venture to direct attention to the clear distinction that exists between pathology proper and what is termed—wrongly—"practical pathology"; for once more do we find that even distinguished members of the Pathological Society are oblivious of such a distinction. It should be clearly borne in mind that all specimens exhibited at the Pathological Society are brought there solely on their pathological merits; and any details of therapeutical or operative measures should be considered matters of purely subsidiary importance. It is the more important to bear this in mind because of the mass of material that is always before the Society requiring exhibition. It is hardly right, but we fear it is unavoidable, that questions of pathological interest should night after night be passed by without discussion, because, owing to the heavily-laden agenda sheet, members fear to trench upon one another's rights, and restrain themselves from raising many interesting topics of debate. But it is even vexatious when cases are shown and related, rare and interesting as they may be, which have no strict right to be discussed in a Society limited to pure pathology. Where the interest of such isolated cases centres in their clinical aspects, they should be taken before that Society which makes it its business to receive and discuss clinical communications. In every respect such a transference would be a gain. It would be a gain to the one Society as affording fresh material for debate, and to the other as allowing scope for the introduction of matters more cognate to its purpose. Now that the Pathological Society has attained such a high position, it should be jealous of its reputation, and limit itself to the reception and discussion of pathological specimens from a pathological point of view. More than once, of late years, have matters nearly reached a deadlock, owing partly to the useless encumbering of the time of the Society with clinical cases to the exclusion of strictly pathological questions. It might be urged that in practising a more exclusive method it would be departing from its traditions. To this it may readily be answered, that in order to keep abreast with the increasing amount of pathological work it must sacrifice something, and that sacrifice can be best made in the direction above indicated.

MEDICAL TARIFFS.

WE are constantly asked about scales of medical charges. The one which has met with most general approval is that of the Manchester Medico-Ethical Association, issued in 1869, and published by J. E. Cornish, 33, Piccadilly, Manchester. There is something so special in the nature of medical service as to make it impossible to apply any scale absolutely, and in no matter is the discretion of the medical practitioner shown more than in his use of a medical tariff, and in the application of it to individual cases. Take, for example, two cases of retention of urine, one in a duke and another in a humble tradesman. The service of the practitioner, who skilfully and gently overcomes the retention, is the same in both cases; but his pecuniary reward must, in the nature of things, be very different. Here the Manchester tariff is quite useless; for, owing to the inherent difficulty of fixing fees for surgical operations, it has avoided the subject, further than to suggest that the fees of the Poor-law Board would constitute a good minimum. But though catheterism is often required in Poor-law practice, the Local Government Board has never yet risen to the generosity of any special remuneration for it. With the understanding, duly expressed by the Association itself, that the Manchester scale is a mere suggestion of minimum charges, it may well be used by every practitioner. Our readers may remember that the scale is based on the supposed income of patients, and the supposition as to income is based on the probable rental of the house occupied by the patient. Another admirable feature of the tariff, which should characterise all medical charges, is—no mention is made of charge for medicines. The cost of these is supposed to be covered by the charges for visits, the Association rightly judging that medical men *should in all cases base their title to remuneration only upon the value of their time and skill.* The tariff

is, with few exceptions, a most sensible document. And as, on the whole, it has our hearty approval, we may content ourselves with criticising one or two suggestions in it which seem to us open to criticism. One of these is, that the General Medical Council alone, acting through the licensing boards, could promulgate anything like a *compulsory* scale of charges. This is a most remarkable statement. The functions of the Medical Council are defined by Act of Parliament. It certainly has never occurred to us that Parliament contemplated giving it the power of regulating medical charges; and, considering how indifferently it has discharged the duties most specifically assigned to it, we cannot wish to see it attempt a duty for which it is about as ill-fitted as it could well be. Another point worthy of consideration is this. The scale recommends that advice at the practitioner's house should be charged at the same rate as for a visit at the patient's house. We scarcely think so. The practitioner is saved the trouble of a special visit, perhaps a short journey, and it seems but reasonable that a little less should be charged. In regard to consultations, the Association says: "When a general practitioner is himself called in consultation, he is entitled to the consultant's minimum fee of a guinea, *but this may be relaxed at the desire of the practitioner previously in attendance.*" The suggestion in italics (which are ours) is one which we cannot approve. It is altogether fit that general practitioners who enjoy the confidence of their professional brethren should be consulted. But in that case they should have the consultant's fee. If the patient is too poor to pay it, it will be better to make no charge than to bring the consultant's fee below a guinea. The responsibility of such a degradation must rest with those physicians of whom we lately had to speak, who see their way clear to attend patients three times for a guinea, and not with general practitioners. Finally, the great principle to be kept in view in all medical charges is that of self-respect, always supposing that self-respect is synonymous with respect for whatever is serviceable in medical art. If charges must be low to adapt themselves to the means of patients, they should never be so low as to compromise this principle.

OSTEO-SARCOMA.

THE proper line of treatment to adopt in cases of osteo-sarcoma is one of great interest to surgeons. The fear of speedy recurrence of the growth when the diseased part only of the bone is removed, and the great severity of the operation for the removal of the whole bone when, as so often happens, the lower end of the femur is attacked, make this question one of as great difficulty as importance. In a recent *brochure* Mons. Poinsot has brought together 51 cases in which amputation through or above the diseased bone has been practised; and from an analysis of these cases he has been led to decide in favour of the higher operations, performed as early as possible. But, curiously enough, these cases show a greater frequency of local recurrence after the high operation than after the low one, and the recurrence was as rapid in one case as in the other. It is hardly possible to doubt that a larger number of cases would give a different result. Unfortunately, we are in the dark as yet on some points in the life-history of these and similar tumours. Why do some recur locally, and not infect the system? Why do others rapidly infect the system? Why do some recur in the lungs, while others are only reproduced in the same tissue as that in which they originate? We need an answer to such questions as these before we can hope to have the line of treatment precisely marked out. Poinsot also deals with the difficulty sometimes experienced in diagnosing between "white swelling" and osteo-sarcoma, and he gives some details of 37 cases in which eminent surgeons have been led into error. Tumours are often stated to date from some injury; their course may be slow, and even interrupted in the manner so common in white swelling; the joint surfaces, which are generally preserved and allow of free movement, may be invaded, and then the neoplasia, growing in the direction of least resistance, will distend the synovial pouches, and closely simulate the masses of granulation tissue in "white swelling." Inflammatory symptoms, and even suppuration, have been noticed with sarcoma, but if, in these cases, the surgeon makes an incision, he at once discovers the true condition of the part from the very free arterial hæmorrhage which occurs. In the same way, a puncture with a grooved needle may be most useful for diagnostic purposes.

CORONERS AND CAUSES OF DEATH.

THE value of the death-register, as the basis of all trustworthy mortality statistics for the purposes of comparative hygiene, is seriously affected by the large proportion of causeless, and comparatively meaningless, verdicts which are still returned at inquests, and transferred from coroners' certificates to the death-register. It appears that many coroners lose sight of the provisions of the 16th section of the Births and Deaths Registration Act of 1874. It is there enacted that at every inquest "the jury shall inquire of the particulars required to be registered concerning the death," and that the coroner shall furnish to the registrar "a certificate under his hand, giving information concerning the death, and specifying the finding of the jury with respect to the said particulars, and to the cause of death." It is scarcely necessary to say that in many parts of the country such verdicts as "accidental death" and "natural causes" are still rather the rule than the exception, or that neither of these forms of expression can be said to afford even a clue to the "cause of death," as to which the jury is to inquire and the coroner to certify. There are few coroners in England more zealous in the performance of the duties of the office, as he interprets them, than the coroner for the city of Manchester, and there are few parts of England and Wales in which so large a proportion of inquests is held as in Manchester. During the June quarter of last year, for instance, inquests were held in more than eight per cent. of the deaths occurring within the city of Manchester, and consequently to that extent was the local death-register, regarded as a basis of mortality statistics, entirely dependent upon the coroners' certificates for information as to the cause of death. Especially important is it, therefore, in Manchester, where the proportion of inquests held is exceptionally large, that the jury and the coroner should carry out the provisions of the 16th section of the Births and Deaths Registration Act, above alluded to, relating to finding and certifying the cause of death at inquests. It appears, however, from the death-register that in 78 inquest cases registered in Manchester during the three months ending June last the verdict found and certified by the coroner or his deputy was simply "natural causes," in some cases supplemented by the words "accelerated by want of medical aid." These 78 causeless verdicts are a serious drawback to the compilation of useful mortality statistics for the city, and while this form of verdict is tolerated, the holding of inquests positively detracts from the value of the death-register as a record of causes of death, so indispensable to the knowledge and progress of public hygiene. A single example will show how a fact important from a sanitary and statistical point of view may be lost sight of by the unsatisfactory nature of coroners' verdicts returned in so many parts of the country. On the 22nd May last an adult female, aged twenty-two years, died in one of the courts of Manchester, and the cause of the death was entered in the register, without medical certificate, as "fever." Subse-

quently an inquest was held, at which the illogical verdict "Natural causes, aggravated by want of medical aid," was returned. It would be interesting to know by what process of reasoning a death from "fever," or indeed any death "aggravated by want of medical aid," can be referred to "natural causes." The death was re-registered from the coroner's certificate, and, as the previous entry, in which the cause of death was described as "fever," was thus superseded, the fact of this death from fever, assuming that the statement was reliable, is lost sight of. We are far from questioning the propriety of holding an inquest in this fatal case of fever, in which no medical assistance had been provided, but, at the same time, desire to call attention to this important defect in the present coroner's system, by which the national death-register actually loses, instead of gains, information as to the causes of death by the holding of inquests. One of the main objects of an inquest should be to obtain and record scientific information of the cause of death, but this is far too generally ignored.

THE SMALL-POX EPIDEMIC OF 1876-77.

ANOTHER epidemic of small-pox is evidently upon us before we have had time to realise the one which began in 1876, and which threw upon the managers of the Metropolitan Asylums the care of, in twelve months, nearly 8000 cases of the disease. We have received only within the last few days the report of the Sanitary Committee of the vestry of St. Mary, Islington, together with that of the medical officer of health, Mr. Meymott Tidy. This rapid succession of extensive and, withal, fatal epidemics of the most preventable of zymotic diseases is one of the gravest facts in current medical and social history. Naturally great interest attaches to Mr. Tidy's special report on the subject. Our readers will remember that at the beginning the epidemic of 1876-77 was described in the press as "the Islington epidemic of small-pox," so peculiar seemed the localisation of the first cases. We naturally, therefore, welcome his contribution to the elucidation of the origin of the epidemic. Mr. Tidy points out that until the first death had been registered in the first week of September, 1876, no case of the disease had been heard of by the sanitary officers, though it was afterwards discovered that the only person in the same house who recovered out of five who were attacked had been taken ill a month previously. Mr. Tidy, in a later part of his report, dwells on the necessity of legislation to compel householders to give notice of infectious diseases in their houses to the sanitary authority. And we quite agree in this suggestion. Still, we cannot help remarking on the fact of the lapse of a month before the sanitary officers heard of such a nest of infection, especially if, as we believe was the fact, the first cases occurred in the practice of the medical officers of the parish, whose information is always at the service of the medical officer of health and his staff. Mr. Tidy says the infection, no doubt, spread from this house. But this is a vague statement, and loses its value altogether when he says that some of the earlier cases were traceable to other sources of infection, that it was *rumoured* that there were earlier cases than the fatal one which first woke up the sanitary staff of St. Mary's, and that the disease was already epidemic in South London. When the new sanitary era set in, and men of scientific reputation were put into positions of officers of health, we hoped to have had more promptitude in the detection of disease in parishes, and more minute care in tracing its genesis and the successive steps of its progress. Mr. Tidy says no sanitary authority has ever successfully resisted an invasion of small-pox. This may be true; but few authorities have had the chance which that of St. Mary's had in 1876, as far as we can gather from Mr. Wilkinson's report of it in our columns. We naturally expect sanitary authorities to do more with their increased powers than they used to do, and, at the very least, we expect a report of the details of the beginning of the epidemic, of the relation of the first cases to each other, or to others in other parts of London. Mr. Tidy shows the value of vaccination, and discusses the evils of bad drainage and overcrowding, and the bearing of them on the thousand cases of small-pox which occurred in the parish of Islington.

THE ACTION OF LAUDANOSIN ON THE CIRCULATION.

A PAPER with this title appears in Ludwig's *Arbeiten* for 1877, from the pen of Dr. Ferd. Aug. Falck. Laudanosin, the formula of which is $C_{21}H_{27}NO_4$, was discovered by Hesse in 1871 in opium, and was at once found to belong to the group of toxic alkaloids, for rabbits died when only seventy to eighty milligrammes were injected beneath the skin of the back in the course of from sixteen minutes to half an hour. The immediate effects were restlessness, accelerated respiration, quivering (first of the ears, and then of the whole body), reddening of the ears, with increase of temperature, salivation, general convulsions passing into opisthotonos, with suppressed respiration and dilatation of the pupils. After this condition had lasted for some time sudden relaxation of the spasm occurred, and apparent, soon followed by real, death. These symptoms indicated a poison acting on the circulation, and Falck determined to investigate its mode of action. The animals he employed were rabbits, curara being previously injected to prevent the disturbing influence of the muscular spasms. The muriate was employed in solution, each cubic centimetre containing 0·01 gramme of uncombined alkaloid. The results of his experiments showed that laudanosin effects an increase in the frequency of the beats of the heart, in consequence of its action either on the accelerating nerves or upon the centres in the medulla oblongata, from which the accelerating nerves take origin. If, however, too large an amount of laudanosin accumulates in the blood, it then exerts a retarding influence on the heart.

TYPHUS FEVER IN LONDON.

IN a sanitary report just issued, Dr. Dudfield, the medical officer of health for Kensington, demurs to the accuracy of diagnosis with reference to four fatal cases of so-called typhus that were registered in his district within two months. The Registrar-General usually specifies in his Weekly Return the precise house, street, and parish in which each death referred to typhus in London occurs, and this has induced Dr. Dudfield to make a careful investigation of the cases, the result of which is a conclusion that the "diagnosis of typhus in at least three out of the four cases may have been an erroneous one." In these three cases the evidence collected, and the immunity of the other inhabitants of the houses in which they occurred, under circumstances calculated to favour the spread of so infectious a disease, appear to render it far more probable that the disease was enteric fever and not typhus. Not so many years ago the diagnosis of fatal fever cases was so doubtful that the Registrar-General, in his classification, did not attempt to distinguish the deaths referred to typhus fever, enteric or typhoid fever, and to simple continued fever. Now, however, these are separately returned, and the confusion of terms pointed out by Dr. Dudfield in the recent fever cases in Kensington is no longer excusable. [It is beyond question that, although true typhus is rapidly disappearing before the advance of sanitary knowledge and organisation in England, it still exists as a disease in most of our large town centres. During last year, within the metropolis, of 1249 deaths referred to fever, 159 were certified as the result of typhus fever, 34 of which fatal cases

occurred in the Metropolitan Asylum Fever Hospitals. To these hospitals 173 cases of typhus were admitted during the year, and of 141 completed cases, 105 resulted in recovery, and 36 in death. The proportional mortality among the completed cases was therefore rather more than 25 per cent., and if this proportion prevailed among the total cases occurring in London last year, it may be estimated that there were no less than 636 persons attacked with typhus within the metropolis. These figures make the correct diagnosis of the disease important, and Dr. Dudfield is doing good service by calling attention to the recent doubtful cases in Kensington. On Saturday last 46 cases of typhus were under treatment in the Metropolitan Asylum Fever Hospitals.

ARMY MEDICAL REGULATIONS.

TWO additional portions of the Army Medical Regulations have been issued with the Army Circular for February, one containing the regulations relating to station hospitals, and the other those for the Army Hospital Corps. They both seem to carry out fairly the principles laid down in the recent warrants for the reorganisation of the department on what has been termed the unification system. Subject to the authority of the general, or other commander, the administration of the station hospitals will be under the control and superintendence of the principal medical officer, who will be responsible for its general arrangements. The hospital will be under the immediate charge either of a medical officer specially appointed by the Director-General, or of the senior medical officer present, who will be responsible for the discipline of the hospital and the distribution of the sick. By these regulations the medical officer is relieved from the charge of the stores and equipment, which now devolves upon the officer of orderlies, and from the duty of obtaining the supplies from the commissariat department and from contractors, which is also transferred to the Army Hospital Corps. In fact, the duties formerly performed by the purveyors' branch, and which, on its abolition, were for the most part laid on the medical officer in charge, now most properly form part of the duty of the officers of orderlies, and the medical officers are merely called upon to perform professional duties, and to maintain their hospital in a state of good order and efficiency.

In the regulations for the Army Hospital Corps provision is made for the instruction of the men in their various hospital duties, and in stretcher and bearer-column drill, under a "medical officer instructor," who is to form part of the depôt of the corps at Aldershot. The duties of the different ranks are laid down clearly, and appear well adapted for the efficient working of the corps. We do not think it necessary to enter into details, but we observe with satisfaction that the duties of the cook have received a more than usual share of attention, and that the instructions for the preparation of the diets and extras have been drawn up with great care.

NUISANCES v. NUISANCES.

A CURIOUS case has recently occurred within the rural sanitary district of Potterspury, Northampton, which touches a method of procedure with regard to a certain sort of nuisance, that it is desirable should be well known to medical officers of health. A glandered horse was shot and buried in certain premises near to three wells, the water of which was used for domestic and culinary purposes and for drinking. The soil in which the grave was dug is highly porous gravel, with water lying at less than four feet from the surface. The burial of the carcass was carried out, the owner protesting as to the place selected, under the direction of the inspector of the Privy Council appointed for the purposes of the Contagious Diseases (Animals) Act. The fact of this burial was brought to the notice of the medical officer of health for the district (Mr. Haviland) in January last, and he, recognising the danger which might arise from a mass of putrefying matter lying in very porous soil contiguous to wells used for potable and other domestic purposes, dealt with the matter as a dangerous nuisance under the provisions of the Public Health Act, and gave instructions for the removal of the decaying carcass to a less objectionable locality. These instructions were acted upon, but the expenses of the removal have been disallowed by the Local Government Board, on the grounds, first, that the removal was made in contravention of the provisions of the Contagious Diseases (Animals) Act, and, next, that the medical officer of health was not empowered to give instructions for the removal. The 60th section of the Act referred to (32 and 33 Vic., cap. 70) provides that every local authority shall cause every horse or animal that has died of glanders, cattle-plague, or sheep-pox, or has been slaughtered in consequence of being affected with glanders, cattle-plague, or sheep-pox within their district, to be buried as soon as possible in its skin, in some proper place, and to be covered with a sufficient quantity of quick-lime or other disinfectant, and with not less than six feet of earth, or to be destroyed under inspection of the local authority in such mode as the Privy Council from time to time may order, direct, or approve. The Act further provides that it shall not be lawful for any person, except with the licence of the Privy Council, to dig up or cause to be dug up the carcass or any part of the carcass of any horse or animal so buried." From this case we may learn that the gravity of a nuisance forms no excuse for setting aside the strict requirements of the law with regard to it. The place in which the carcass was buried in this instance was, no doubt, injudiciously selected, but in his natural anxiety to abate the nuisance arising from this selection, Mr. Haviland appears unwittingly to have sinned against the provisions of both the Contagious Diseases (Animals) Act and the Public Health Act, 1875.

THE PHYSIOLOGICAL ACTION OF GLYCERINE.

WE drew attention some time ago to some interesting and important experiments made by M. Catillon upon the physiological and therapeutic action of glycerine. (THE LANCET, Sept. 1st, 1877.) It will be remembered that he found that glycerine caused a considerable diminution in the excretion of urea, a rise of temperature, and, when continuously employed, an increase of weight. He proved, too, that it was entirely absorbed unless given in very large quantity, when a small proportion escaped by the urine; and that it could not be found as such in the blood. Hence he concluded that it served as a supporter of combustion and saved the waste both of the fatty and nitrogenous tissues, this explaining the increase of weight, diminution of urea excretion, and rise of temperature. But he did not show at the time by direct experiment that the products of combustion, in the shape of carbonic acid and water excreted by the lungs, were proportionally increased, which they should be if this view were correct, and this he has now done by further experiments recently communicated to the Société de Biologie, which were made in M. Vulpian's laboratory. He found by experiments on dogs that the percentage of carbonic acid in the breath was notably increased by administration of glycerine, and that not only did it augment with increase of dose, but this augmentation lasted longer the larger the dose. The increase of carbonic acid began to show itself about an hour after taking the glycerine, reaching its maximum in three or four hours, and lasting from five to ten hours. And not only was the percentage in the expired air increased, but the total quantity was also greatly increased, so that nearly all the carbon contained in the glycerine was accounted for in the carbonic acid. This result seemed to be attained by an increase in

the amplitude of the respirations, their number per minute continuing the same; but it was not proved that this increased amplitude became greater with a larger dose. It was proved, too, that where disease of the lungs, such as pneumonia or emphysema, existed, there was still the increase of carbonic acid. A very important point, also noted by M. Catillon, is that the transformation of the glycerine into water and carbonic acid seems to be direct, no intermediate oxidation products, such as glyceric, formic, or oxalic acids, being discovered in the blood.

THE ELECTION OF MEDICAL OFFICERS TO HOSPITALS.

MR. HENRY LEE, finding his engagements interfered with his due attendance at St. George's Hospital, has resigned the office of surgeon, which he had held for fifteen years. At a Special Court of Governors, Mr. Lee was unanimously elected a consulting surgeon; Mr. Pick, the senior assistant-surgeon, has been elected surgeon; and Mr. E. C. Stirling, assistant-surgeon, vice Mr. Pick. This is the first election at this hospital held under the new law, by which the medical officers are appointed by a committee who are chosen annually for this purpose. Not only the governors, but the medical profession may be congratulated on this change in the mode of election. Instead of the candidates having, as formerly, to canvass the whole of the governors, which was always attended with a very considerable expense, their claims are now carefully considered, and fairly weighed, by competent judges, and they are elected without the cost of a single penny to themselves, and all the evil consequences which so often attended the old mode are avoided. We hear that there was no dearth of candidates for the office of assistant-surgeon. Both gentlemen are Fellows of the Royal College of Surgeons by examination, and Mr. Pick is a member of the Board of Examiners.

THE METROPOLITAN WATER BILLS.

AN important deputation of the representatives of the Water Companies of the metropolis waited upon the President of the Local Government Board, Mr. Sclater-Booth, on Monday last, the 25th ult., to urge the Government, through him, to oppose the second reading of the Water Bills promoted by the Metropolitan Board of Works. The arguments advanced, as might have been expected, related to the matter as viewed from the Companies' stand-point, not that of the metropolitan public. The deputation was particularly anxious to set forth its opinion of the unfitness of a body constituted as the Metropolitan Board of Works to undertake the supply of water to the metropolis. Mr. Sclater-Booth reserved an expression of opinion upon the questions raised by the deputation for his place in the House, and significantly intimated that they were of a nature best "threshed" out there. The deputation expressed regretful feelings as to the litigation which would arise should the Bills pass a second reading; in other words, it stated pretty clearly that the Water Companies would fight to the death. Let us hope that the metropolitan public are quite as well prepared to fight as the Companies. The whole tone of the deputation showed the necessity, if the water supply of the metropolis is ever to be as it should be, of getting rid of the Companies, and placing the control of the supply in the hands of a representative body.

THE USE OF INFECTIOUS DISEASE HOSPITALS.

THE medical officer of health for the rural sanitary district of Uxbridge, Mr. Charles Roberts, in his recently published report for the year 1877, gives some interesting facts respecting the value of hospital accommodation in arresting the progress of infectious diseases. He holds that the epidemic of scarlet fever which lately prevailed in the Southall division of his district was distinctly checked by the isolation he was able to effect of many cases, seventy-eight in all being removed to hospital. Further, he shows how, by having the means of isolation, and by the vigorous destruction of infected clothing and bedding, small-pox was stamped out on three separate occasions during the year. A case was introduced into the district by a barge, and another from London. By immediate isolation no spread occurred from either of these cases. Another case introduced from London communicated the disease to two other persons in the district, but the disease was then arrested, and no further cases occurred. The secret of this success was the existence of the means for isolation beforehand, the early information given to the medical officer of health, and his preparedness to act at once and vigorously as far as the law would permit.

WINTER CLIMATES OF ENGLISH HEALTH-RESORTS.

AT the monthly meeting of the Meteorological Society, held on the 20th February, Mr. C. Greaves, F.G.S., president, in the chair, Dr. Tripe, the medical officer of health for Hackney, read a paper on the "Winter Climates of some English Seaside Health-resorts." The places selected for discussion were Scilly, Torquay, Penzance, Guernsey, Barnstaple, Ventnor, Llandudno, Ramsgate, and Hastings, and the climatic characteristics of each place were compared with those of London. The results of the discussion, briefly summed up, were as follows:—The mean daily winter temperature of these seaside places, and especially of the places situated on the coast of Devon and Scilly, is higher than in London; the mean daily maxima and minima are also higher, especially the latter, so that the daily and monthly ranges of temperature are smaller; the mean humidity is less; the general direction of wind about the same; but the number of rainy days and the rainfall are greater at the seaside. As regards the wind, the chief point to be especially noticed is the amount of shelter afforded by high land, as at Ventnor, and especially the amount of protection against the stormy and cold winds which ordinarily prevail at the end of February and in March. The soil should also be considered, as heavy rains at gravelly and chalky places are not so objectionable as on clayey ground.

THE ESTATE OF PAUPERISM AND LAUDANUM-DRINKING.

THE South Shields guardians had their attention drawn recently to a difficult question in casuistry. Strange to say, it was a medical man who projected this question into their discussions. Dr. Bradley, of Jarrow, says the *Jarrow Guardian*, drew attention to the recent death of a pauper named Benjamin Harkness, at Jarrow, who had been an habitual drinker of laudanum, and asked if the guardians, in giving the pauper a weekly allowance of 2*s.*, were aware that he spent a portion of the money in procuring that which contributed to his death? It would be difficult to estimate the culpability of a pauper who had a spinal disease—according to the district medical officer's book—and who, to relieve the pain of it, took laudanum. Certainly some great moralists have done the same. Nor would it be more easy to be sure that life was shortened. But the most difficult thing of all would be to bring back Benjamin Harkness, deceased, without whose evidence the question raised by Dr. Bradley could scarcely be settled. We are no advocates for laudanum-drinking, but to discuss the use which a pauper with spinal disease has made of 2*s.* a week, after he is dead, seems to us not a dignified occupation for a Board, the more so as an inquest had been held on the subject. The guardians very properly declined any action in the matter.

THE EXECUTIVE COMMITTEE OF THE MEDICAL COUNCIL.

THE Executive Committee of the General Medical Council have directed the Registrar, in consideration of the opinion expressed by the Court of Queen's Bench, to restore the name of Dr. Levenston to the Register. The Committee have had under their consideration an appeal from the Board of Trade for information as to objections, in the opinion of the Medical Council, to the repeal of so much of Section 10 of the Weights and Measures Act of 1835 as provides that "drugs may be sold retail by apothecaries' weight." The Executive Committee resolved that the Council could not recommend the suggested repeal, because the grain weight used in prescribing and dispensing is not an integral part of the avoirdupois weight, the lowest integer in which is the drachm, corresponding to about 27·34 grains.

THE LONDON SMALL-POX EPIDEMIC.

DURING the five weeks ending last Saturday no less than 213 deaths from small-pox were registered in London, whereas in nineteen of the largest provincial English towns, not a single fatal case of this disease was recorded during the same period.

The deaths from small-pox in London, which had been 55 and 47 in the two preceding weeks, further declined to 39 last week, of which 24 occurred in the Metropolitan Asylum Hospitals. The weekly returns of these hospitals continue to afford evidence of the rapidly increasing prevalence of small-pox in London. The small-pox patients in these hospitals had declined to 137 at the beginning of October last, since which they have steadily increased, and were 554 and 630 on the 16th and 23rd ult. No less than 173 new cases were admitted to these hospitals during last week, against 127 and 139 in the two preceding weeks.

OUR MEDITERRANEAN FORTRESSES.

IT is not, perhaps, within the knowledge of all our readers that in the great fortresses of the Mediterranean—Gibraltar and Malta—English troops are peculiarly susceptible to a hybrid fever, simulating typhoid so closely as to puzzle the medical attendant if he happens not to have given the malady a little study or consideration. Professor Maclean, of Netley, gave the fever the designation of typho-malarial; but Surgeon-Major Donaldson, in an instructive report on the fever, objects to the term, and uses, instead, the name of fæco-malarial fever, which significantly indicates the factor in the genesis of the disease. The latter term, however, does not meet with the approval of Professor Maclean, who considers it a good example of a "distinction without a difference," and expresses a hope that we are a long way off from having to talk of fæcal fevers when other and less unsavoury words will answer every purpose.

SIR WILLIAM JENNER AND THE BRITISH MEDICAL ASSOCIATION.

WE understand that Sir William Jenner has sent in his resignation as a member of the British Medical Association, on the ground of the share women are allowed to take in its proceedings. Sir William has, we believe, consented to postpone his actual retirement until the Council has deliberated as to the course of action it may see fit to take.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE annual general meeting of this Society, for the election of officers and the reception of the report of the Council, will be held this evening (March 1st), when an address will be delivered by the president (Dr. C. West). On the same occasion the Marshall Hall prize will be adjudicated; and a recommendation of the Council, that in future the meetings of the Society be held from the fourth Tuesday in October to the second Tuesday in June, instead of from the second Tuesday in October to the fourth Tuesday in May, will be considered.

DR. J. M. WOODWORTH, Surgeon-General Mercantile Marine Hospital Service, U.S., has republished, in the form of a pamphlet, from the Transactions of the International Medical Congress, his contribution on the subject of Quarantine, with particular reference to Cholera and Yellow Fever. The pamphlet cannot fail to interest a large number of readers in a maritime country like ours. The following, *inter alia*, are some of the conclusions at which Dr. Woodworth has arrived. A system of port sanitation should be adopted and administered for each country or place separately, and should be modified in particular cases by taking into account the liability of the port to infection, the period of the incubation of the disease, the length of time consumed in the voyage, and the measures enforced by the vessel *en route*. In some countries the detention of passengers and crews of ships hailing from infected ports is warranted, but for such time only as is necessary to complete the period of incubation of cholera or of yellow fever, counting from the date of departure from an infected port or of landing from an infected vessel.

THE *Lincoln Gazette* devotes three columns of small type to the report of an inquest upon the body of a chambermaid who had died of hæmorrhagic small-pox under singular circumstances at an inn in that city. The disease would appear to have been introduced into the family by a boy who had contracted the malady in London. Five of the family had been attacked with the disease, four of them so slightly that it was believed not to be small-pox, and they had not been seen by a medical man. Medical aid was not summoned to the chambermaid until the day before her death. The maid was found dead upon the floor of her room, and suspicions of neglect were aroused, but the jury found that there had been no wilful neglect, and that the death arose from natural causes—to wit, small-pox. The history of this group of cases presents several points of interest which deserve to be recorded, and it is not unlikely that other cases will occur in connexion with them.

DR. DUDFIELD, the medical officer of health for Kensington, has induced the London School Board to give instructions to their visitors in that district to assist him by reporting confidentially to him any cases of the graver infectious diseases which may come to their knowledge in the course of their duties. The vestry of Kensington have issued books of forms to facilitate the work of the visitors in this respect. The confidential relationship thus established between the medical officer of health and the visitors cannot fail to be productive of good. So highly has Dr. Dudfield's suggestion been approved by the School Board, that similar instructions to those given for Kensington have been issued to all the visitors in the metropolis.

THE twenty-first annual report on the health and sanitary condition of the parish of Lambeth (compiled by Mr. A. Farr, medical officer of health) has been published by the vestry. We find that in the year ending March 31st, 1877, there were 8970 births and 5329 deaths registered in Lambeth. Estimating the population at 233,927, the death-rate was 20·56 per 1000. Of the deaths, 1118 were referred to diseases of the zymotic class, small-pox being credited with 221 and scarlet fever with 123 deaths. The table excludes strangers to the parish, of whom 150 died of small-pox, thus bringing up the total mortality from this disease to 371. Diph-

theria caused 32 deaths, and the medical officer appends some interesting particulars of some of the fatalities. Two fatal cases occurred in a house where a stoppage of a drain took place close to the back door. The drain had been opened and left exposed by the workmen for several days. Nearly all the inmates suffered from sore-throat, and two of the youngest children died. Again, two deaths from diphtheria occurred in a family at Brixton. On the top landing of this house, level with the nursery, was a water-closet, and in a cupboard on the same landing immediately adjacent to the water-closet was the cistern supplying the closet, and this being provided with a tap, the children sometimes drank of the water. On examination the water in the cistern was found to be contaminated with sewer gas.

THE Water Examiners' report on the metropolitan waters for the month of January last describes the water of the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies as again much polluted by organic matter, and as quite unfit for dietetic purposes, even after the efficient filtration to which it had been subjected. By filtration through spongy iron the proportion of organic matter was reduced to about one-third, and the hardness to little more than one-half, of its original amount. The water of the Lea, though efficiently filtered by the East London and New River Companies, was considerably polluted by organic matter in solution.

JUDGING from the recently issued quarterly report of Mr. Liddle, medical officer of health for Whitechapel, a very large amount of overcrowding must exist in the district. One cause of the evil appears to be a great immigration of Poles, who arrive in a very destitute condition, and are quartered on their compatriots, scarcely better off than themselves. Mr. Liddle has instructed the inspectors to make diligent and thorough inquiry into the extent of the overcrowding.

THE mortality in London last week was at the rate of 25·6 per 1000. Whooping-cough continues to be the most fatal of the zymotic diseases, 100 deaths being attributed to the malady. Measles comes next, with 40 deaths; smallpox accounts for 36, scarlet fever for 34, diphtheria for 9, different forms of fever for 24, and diarrhœa for 11. The fatality of diseases of the respiratory organs declined, 475 deaths being attributed to them last week, against 544 in the previous week.

THE attention of the Local Government Board has been called to an outbreak of enteric fever in the Kensington district. Several severe cases had occurred in the Cromwell-road and its neighbourhood, and there are good grounds for thinking that most of them were due to milk contamination. The Local Government Board has requested to be furnished with a report on the matter by the medical officer of health.

WE learn with regret that the collections in aid of the Manchester and Salford Medical Charities, made on Hospital Sunday and Hospital Saturday, show a considerable falling off as compared with former years. The amount sent in as yet in aid of the Sunday Fund is £4400, while last year a sum of £5477 was collected. The Saturday Fund shows a great diminution in returns.

THE *Indian Medical Gazette* publishes a lengthy article on "The Future of the Indian Medical Service." Our contemporary deprecates all attempts to reorganise the service, which, it claims, is now contented and highly efficient, and strongly urges the Government to consider the question very thoroughly before committing itself to any serious interference with an organisation which has worked so well.

IT is announced that the Spanish Government have ordered the collection of statistics of leprosy. In a medical report, presented to the Governor of Valentia, it is stated that that province contains forty-five lepers; but it appears to be difficult to obtain precise information, the disease being concealed, or disguised under a variety of names.

IN Edmonton about thirty cases of enteric fever have lately come under the notice of the sanitary authorities. The outbreak is considered to be due to well-pollution. A thorough overhauling of the sewers &c. should be at once made.

A NEW WORKHOUSE INFIRMARY.

THE new infirmary erected for the sick poor by the guardians of St. George's Union in the Fulham-road is a work of considerable magnitude, and reflects no small credit upon the guardians and their architect. In this new hospital, which is in fact the largest in London, accommodation is provided for 830 patients; and Mr. Snell, the architect, has shown how it is possible to stow away a large number of patients on a limited area under conditions which, if not absolutely perfect, show a considerable advance in the direction of wholesomeness. The buildings consist of seven pavilions, connected by a corridor, together with the necessary offices—viz., officers' quarters, kitchens, stores, cellars, mortuary, doctor's house, and chapel. The area upon which the buildings stand is only two acres and three-quarters in extent, and cost £20,000, being acquired under the compulsory powers given to guardians by the Poor-law Amendment Act of 1867. The contract for all the works, inclusive of fixtures for lighting, warming, and sanitary arrangements, was £85,000, or about £100 per bed.

Each pavilion has four storeys, with a ward on each storey. The wards are 82 ft. by 28 ft. (outside measurement), and about 15 ft. high, and each contains 28 beds. The area allotted to each bed is therefore about 82 ft. The floors are of deal, and the walls are cemented. The windows reach to the top of the walls, the upper part opening by a sash, and the lower part by a casement arrangement. The water-closets and bath-room are at the far end of the ward, the latter serving as a lobby to the former. The area thus occupied is 12 ft. square, and seems to us to be amply sufficient, for in it are provided a bath and lavatory, two water-closets, and a slop-sink, with plenty of light and no crowding. We are glad to see that Mr. Snell has not fallen into the error of allotting too much space to these offices, for we are convinced that to do so merely leads to dirt and untidiness, and to the using of the closets as sort of lumber-rooms. The closets and sinks are all fitted with the so-called Duplex lids, whereby the pans are exposed to the open air when the lid is closed. These lids are made by Mr. Howard, of Upper Baker-street.

Beneath each bed is a ventilating inlet, and the air entering passes over a water-pipe, so that in winter the air is warmed. Ample outlets for foul air are provided in the roof. Each gas lamp in the ward has its proper flue. In addition to the hot-water pipes, each ward contains a stove, which is the invention of the architect, and has been called by him the "thermhydric grate." These stoves consist of an open fire, front and back, with descending flues passing beneath the floor to chimneys in the walls. They are surrounded by water, and at the sides are two water-coils through which the hot water circulates when heated by the fire. There are also fresh-air inlets connected with these stoves, so that they present a happy combination of great economy of heat with a maximum amount of ventilating power. We shall take another opportunity of referring to this stove when we have seen it in action.

Each pavilion is about 60 ft. in height, and the distance between the pavilions is about 58 ft. We could have wished that a little money had been spared for æsthetic considerations, for the appearance of the courtyards, flanked on either side by the plain brick walls of the pavilion, is, to say the least, workhousy and depressing. We would point out also that the doors of the wards are decidedly too narrow. A hospital door should be wide enough to admit a patient on a stretcher with an attendant walking by the side. Mr. Snell's doors are scarcely a yard in width.

Each pavilion contains a lift and a staircase, and on each floor, besides a big ward, there is a nurses' room and ward kitchen, a small separation ward, and a nurses' water-closet. A tramway runs the whole length of the corridor for the purposes of administration. The chapel is exceedingly simple and tasteful, and shows what good effects may be produced at small cost. It also shows that Mr. Saxon Snell could have easily introduced some ornamentation into his pavilions if a little latitude had been given him in this direction by those who manage the finances of the St. George's Union.

HEALTH OF THE ARMY.[1]

THE report on the health of the army for 1876 has appeared at a somewhat earlier period than in previous years, but we do not think that this compensates for the want of the detailed tables of diseases and other information which then formed an important part of the appendix, and were probably the cause of the delay. The results, as regards the health of the troops, are, on the whole, very satisfactory. The sickness, as shown by the admissions into hospital, corresponds very closely with the preceding year. The mortality amounted to only 11·03 per 1000 of the strength, being, if we mistake not, the lowest ratio shown in these Reports. The invalids sent home from foreign stations were in excess of the preceding year, but considerably under the average of the last ten years; the proportion finally discharged as unfit was, however, slightly above the average.

The admissions into hospital were lower than in 1875 at all the stations except Gibraltar, Bermuda, Mauritius, the Straits Settlements, and India; but in none of these, except Mauritius, was the increase of any importance. The deaths also were lower in all except Gibraltar, the Cape, and the Straits Settlements. In Gibraltar the increase was confined to the 102nd Regiment, which arrived from England in April just before the hot weather begins. The excess of admissions was chiefly from continued fever and rheumatism, and was probably due to the carelessness of the men in exposing themselves to the sun; that of deaths was principally caused by heart disease. In Bermuda the admissions were almost identical with the preceding year. The increase in the admissions in Mauritius was chiefly in influenza and syphilis in the class of general diseases, and in local diseases in those of the respiratory and digestive systems, the eye, and the urinary system (probably gonorrhœa, but we have no means of ascertaining this point). The mortality was less than half the proportion of the preceding year, and scarcely one-third of the average of the last ten years. Paroxysmal fevers still seem to be the cause of a great amount of inefficiency in this island, the admissions by these having been 559 per 1000 of the strength, but they have lost the fatal character which at one time marked them, only one death having occurred during the year. The troops in the Straits Settlements furnished a high ratio both of sickness and mortality, the former having been 1247, and the latter 22·66, per 1000. The admissions were chiefly caused by fevers and diseases of the digestive system, and the deaths by the latter amounted to 22 out of a total of 38. This is attributed to the exposure of the men on field service. One of the medical officers states that "many cases of diarrhœa and dysentery were attributable to the want of proper dieting and to exposure." Sixteen cases were admitted for injuries received in action, but none were fatal.

In India there was an increase in the proportion of admissions into hospital in Bengal and Madras, and a decrease in Bombay; while in the deaths there was a very slight increase in Madras, and a decrease in Bengal and Bombay, amounting in the latter to 8 per 1000 of strength. In Bengal the increase in admissions was chiefly from the great prevalence of paroxysmal fevers at Meean Meer, but there was a slight reduction in the mortality by them. In Madras the excess of admissions was in diseases of the digestive system, principally tonsillitis and dyspepsia, and in continued fevers; the mortality by the latter and by cholera was higher than in 1875, but this was counterbalanced by a reduction in the deaths by phthisis and by diseases of the circulatory and digestive systems. In Bombay the reduction in the rate of admissions took place chiefly in the febrile group, and in diseases of the digestive system; the great decrease in the deaths was in those from cholera, and, though to a less extent, also in those by diseases of the nervous system, especially heat apoplexy.

Cholera, the usual cause of great mortality in India, did not prevail as an epidemic in Bombay or in Madras; in Bengal it broke out in July at Murree and Camp Ghareeal, where 33 cases and 27 deaths occurred; in August and September there were 11 cases with 5 deaths at Allahabad; and in September and October 58 cases and 39 deaths at Peshawur.

Dengue fever, which had nearly disappeared in 1875, again prevailed as an epidemic in Bengal, at Allahabad, Umbulla, and Lucknow; at each of the two former it attacked only one regiment, but at Lucknow spread to every corps in the garrison. In Madras only six cases of this disease occurred, and in Bombay none.

Enteric fever, the existence of which in India has only been recognised of late years, prevailed as an epidemic at Cherat, where 13 cases and 4 deaths occurred among 411 men; at Ferozapore, in the 34th Regiment, which had 17 cases and 5 deaths in a strength of 929; at Fyzabad, where 20 cases and 10 deaths occurred, chiefly in the 1st Battalion 25th Regiment; and at Lucknow, where there were 19 cases and 6 deaths. Of the disease at the last station no particulars are stated in the Report. At Fyzabad the medical officer attributed it to "a local poisoning through the medium of the well-water;" and no information is given as to the cause of the outbreak at Ferozepore or Cherat. In Madras enteric fever was epidemic only at Secunderabad, where 42 cases and 14 deaths occurred, but no information is given as to its probable causes. In Bombay there were 10 cases and 4 deaths at Poona, pretty evenly distributed over the year; and at Neemuch 12 cases and 7 deaths occurred in the Royal Artillery in rapid succession in the third and fourth quarters. The medical officer in charge at Neemuch reports that "the probable cause of the outbreak was the insanitary state of the latrines."

The Report affords abundant evidence that the sanitary condition of the various stations at home and abroad has been carefully attended to, and that the medical officers are fully alive to the value and importance of preventive measures. In many of the barracks the waste-pipes of the sinks and the overflow-pipes of the cisterns have been disconnected from the drains; and separate cisterns have been provided for the supply of drinking-water, and for water-closets and flushing purposes. In Dublin, especially, great improvements have been effected in the drainage of the barracks and the ventilation of the drains, and apparently not before they were needed. The water-supply for the troops in Ireland appears to have received special attention, and in some of the barracks new wells have been sunk, or, as at Belfast, water has been obtained from other sources. In some of the barracks in Ireland, as Charlesfort, Templemore, &c., earth-closets have been introduced; and we trust that in future Reports full information respecting their working, whether successful or unsatisfactory, will be given.

There appears to be a pretty general feeling among the medical officers that the ration of meat—three-quarters of a pound uncooked—is not sufficient, especially for the young growing lads who now constitute so large a proportion of the home force.

Minor, but by no means unimportant, sanitary improvements have been carried out in the Mediterranean, but no great change is reported. From Malta there is an interesting account of some cases of enteric fever among the men of

[1] Army Medical Department Report for the year 1876. Vol. XVIII. Parliamentary Blue-book. pp. 208.

the Army Hospital Corps, and their connexion with the water-supply. The military prison, which in 1876 furnished numerous cases of enteric fever, was in 1876 free from it, a result attributed to the introduction of the dry-earth conservancy system.

At the Cape of Good Hope, sanitary improvement appears to be much wanted at Cape Town, where the Castle-ditch forms the principal sewer—and an open one—for the town. This has been repeatedly represented, but, owing to the large amount of money which would be required to remedy it, nothing has been done. On the eastern frontier and in Natal additional barrack accommodation is much required; but, notwithstanding all these drawbacks, the health of the troops has been satisfactory.

The authorities in Ceylon appear to have adopted the plan of sending home a few invalids by each mail steamer, instead of, as formerly, allowing them to accumulate, and sending home a large batch once or twice a year. This is said to have been attended with great benefit to the sick, and relief to the hospitals.

In the Malay Peninsula, where the troops were on field service, the medical officer states that "the huts erected at Qualla Kangsa were not raised from the ground, and the sickness was very great in consequence." River water was first used for drinking, but was so impure that Norton's wells were sunk, with the result that dysentery and diarrhœa became less prevalent.

In Bengal, sanitary measures have been well kept in view, and improvement in the accommodation and condition of the troops progresses. An excellent report by Surgeon-General Crawford on the sanitary aspect of the occupation of Peshawur and Cherat is given, and also extracts from a letter on the sanitary condition of the troops at Mecan Meer, but they are of too great length to be quoted here, and do not well admit of condensation.

In the Appendix the usual annual report on the progress of hygiene for the year, by the Professor of Military Hygiene in the Army Medical School, is inserted. Dr. De Chaumont divides it under four heads—1, Legislation; 2, The Work of Societies; 3, Literature; and 4, Special Points of Hygiene: the last comprising four subsections—viz., 1, Water; 2, Air and Ventilation; 3, Drainage and Sewage; 4, Food. We have already stated that the question of the water-supply had received careful attention. Of this there is evidence in the fact that 139 analyses were made in the laboratory at Netley, the results of which are given in a table in Dr. De Chaumont's report. 76 of these were of water from stations in England, 5 in Scotland, 49 in Ireland, 8 sent from Gibraltar, and 1 of water condensed on board H.M.S. *Myrmidon*. There were, in addition, 19 qualitative analyses of water from the wells at Colchester barracks.

The Appendix likewise contains an account by Surgeon-Major Porter of 90 operations performed at Netley Hospital, and a report also by him on the administration of chloroform and ether as anæsthetics; a medical history of the field force employed in the Straits Settlements, by Surgeon-Major Davie; an account by Surgeon Charlton of the march from Bhamo to Manwyne; and several interesting papers on professional subjects contributed by medical officers to which we may probably refer on a future occasion.

The Report affords abundant evidence of the care and attention bestowed by the officers of the department upon the health of the troops committed to their charge, and of their just appreciation of the importance of preventing disease by means of judicious sanitary arrangements. It shows the valuable influence of such measures, and also some of the difficulties which army medical officers have in carrying them out to the full extent, on the ground of financial considerations. The results cannot but prove a stimulus to them to persevere in their course of usefulness from a conviction that, though the progress is slow, it is satisfactory, and carries with it important consequences to the army and the country generally.

We cannot conclude without an expression of regret at the omission of the valuable tables which used to form part of the Appendix of the Report. We presume it is some piece of cheese-paring economy at the Stationery Office, as we cannot believe the Director-General would willingly consent to a step which detracts so much from the value of the Department Reports to the authorities and to the profession generally. It deprives us of the means of comparing the prevalence and mortality of various important forms of disease in civil and military life, and in foreign armies and our own; it leaves us without the means of testing the accuracy of the statements put forward in the Report itself; of testing many important questions, such as the operation of the Contagious Diseases Acts; of judging how far the reduced rate of mortality is due to the decrease in the number of old soldiers arising from the operation of the various changes in the organisation of the army; and many other interesting questions. We trust the Director-General will use his influence with Mr. Hardy to have these tables restored. The operation of cutting down has not been applied to the Navy Reports; why should it be permitted in those of the Army?

MEDICAL ASPECTS OF THE ARMISTICE.

WE have several times referred to the probability of a wide distribution in Russia of typhus and other contagious diseases rife among the sick soldiers and prisoners sent from the seats of war in Armenia and Europe into the interior of the empire. It is now known that typhus and small-pox, and probably also a serious form of dysentery, have thus been distributed broadcast in the interior of Russia, and have extended among the civil communities. The serious nature of the evil has rendered it necessary that special measures should be adopted to combat it. To this end a special Imperial commission has been appointed to regulate and control the convoys of sick and wounded and prisoners coming from the seats of war. This commission consists of four sections—namely (*a*), the Minister of War, with whom is associated a transport functionary and a medical man; (*b*) the Minister of the Interior, with whom is associated an official of his department and three physicians; (*c*) the Minister of Roads, with whom is associated two engineers; and (*d*) two delegates of the Society for the Protection of Sick and Wounded Soldiers. This commission is instructed to work by its agents from four defined points—namely, from (1) Rostov-on-the-Don, superintending the passage of sick and prisoners between Voronege on the one hand and Vladikaskav on the other, including all lateral lines of communication; (2) from Kischenew, superintending the district between that town and Kiew in one direction and Yassy in the other; (3) from Kiew, superintending the region extending thence to St. Petersburg, Warsaw, and the coasts of the Baltic; and (4) from Moscow, superintending the communications between that city and St. Petersburg, and between St. Petersburg and Finland, also in other directions, linking its work with the Kiew and Rostov sections of the commission, at Voronege and Kiew. A medical supervision will be established over all convoys of sick, wounded, and prisoners, and the most energetic measures are directed for separating and isolating cases of infectious maladies.

The state of things in the Caucasus during the winter, according to the *Messager du Nord*, appears to have been most disastrous. At the beginning of winter it was found that the preparations for the sick, large though these had been, and notwithstanding the lavish supplementary assistance given by the Russian Red-Cross Society, fell below the exigency of the occasion. The victories of the autumn in Armenia filled the hospitals to overflowing with sick and wounded, and a crowd of Russian prisoners, many sick, added to the difficulties of the situation. Provisions became scarce, tents had to be largely used for shelter in the increasing cold, typhus, malignant fevers, and dysentery broke out among the sick and wounded in hospital and among the prisoners. At first the sick among the Turkish prisoners were admitted to the Russian hospitals indiscriminately with the Russian soldiers, with the result of rendering the spread of typhus and dysentery inevitable. Attempts were made then to weed out the sick and suffering from infectious diseases, and to establish them in the villages. This was at first attended with some success, but presently typhus, and other infectious maladies crept in among them, and thus was spread among the civil communities. Mean, while, the medical and nursing staffs were decimated by typhus, and the insufficiency of these staffs was thus aggravated. The difficulties of transport prevented any considerable relief being obtained for the overcrowding of hospitals and the localities where the prisoners were established, by scattering both the sick and prisoners over larger tracks of country; and from the same cause the material aid sent

was inadequate. At the latest news the condition of things was becoming worse rather than better, and Tiflis in especial was reported to be suffering. Typhus has been widely disseminated in that city, and fears are entertained that the prevalence of the disease will increase rather than diminish with the approach of spring. A Sanitary Commission has been appointed at Tiflis, and a sum of 100,000 roubles allotted to it for the execution of sanitary works in the town. Altogether, the state of the sick and wounded, the Turkish prisoners, the Russian troops, and the civil populations in the Caucasus, where the troops are stationed, would appear to be most deplorable.

THE VOMITING OF PREGNANCY AND ITS TREATMENT.

To the Editor of THE LANCET.

SIR,—I have read with much interest the communication of Dr. M. O. Jones and Dr. J. Marion Sims, in your impression of February 23rd, on the subject of "the Vomiting of Pregnancy and its Treatment." My own experience quite bears out all that your contributor and Dr. Marion Sims assert as to the good effects which have resulted in such cases from the application of nitrate of silver to the os and cervix uteri. It is more than ten years since I first decided on trying nitrate of silver, after all the usual remedies had failed, in the case of a patient under my care at St. Mary's Hospital, who was suffering from a most obstinate attack of vomiting during pregnancy. The remedy, therefore, is not absolutely new, nor is it infallible. I believe it, nevertheless, to be in many cases a very valuable one. Indeed I suggested its use, amongst other remedies, in my "Student's Guide to the Practice of Midwifery."

I am, Sir, your obedient servant,

Manchester, Feb. 25th, 1878. D. LLOYD ROBERTS, M.D.

PESSARY CATHETER.

To the Editor of THE LANCET.

SIR,—Your impression of the 9th inst. contains an illustration and detailed account of an instrument purporting to be the invention of Mr. Reginald Harrison, by the aid of which drugs can be applied with facility to the surface of the bladder. As, doubtless, Mr. Harrison is not aware of the circumstance, I venture to call his attention, as well as that of your readers to the fact, that the cocoanut-butter pessary (the means he employs) was first introduced to the profession by Mr. W. Donald Napier, and was by that gentleman intended to serve a threefold purpose—viz., a point to favour the introduction of an instrument, a lubricator, and, lastly, as a ready method of allaying irritation in both urethra and bladder, by the combination of certain drugs with the cocoanut-butter.

Yours obediently,

Feb. 26th, 1878. F.R.C.S.

BIRMINGHAM.

(From our own Correspondent.)

FROM Dr. Hill's quarterly report of the public health of Birmingham which has just been issued, it appears that the death-rate has been 24·21 per thousand, a considerable increase over the death-rate of any of the corresponding quarters for the last five years, except in 1874, when the epidemic of small-pox was raging. Whooping-cough, scarlatina, and measles have been the chief causes of the increased mortality, only three cases of small-pox having, happily, come under the medical officer's notice, and but one of these proved fatal. The Borough Hospital has only received three cases of scarlatina during the quarter, and as the disease has been rife in the town, the Health Committee have some thought of encouraging the public to send cases of zymotic disease there, by allowing the patients to be attended by their own private practitioners, instead of by the special officer appointed by the town. Before taking so important a step, they have, however, very properly asked the opinion of the presidents of the two chief medical societies of the town as to the safety and propriety of the proceeding.

A new recreation ground, four acres in extent, and attractively laid out, has been generously presented to the town by Mr. W. Middlemore, J.P., which will be a great boon to the children of the working classes in the densely packed quarter of the town in which it is situate.

The Provident Dispensary scheme is still under the consideration of the special committee appointed by the British Medical Association and the Midland Medical Society, and they are endeavouring to acquire all the requisite information on the subject before conferring with the original promoters of the movement in this town. The abuse of medical charities, which this scheme is intended to check, is undoubtedly enormous, and I believe that the adoption of the provident principle might be grafted on to the present charities with equal advantage to the profession and to the public. The Birmingham Dispensary is about to start a new branch in one of the suburbs; why should it not commence the experiment there, instead of swelling the already too large gratuitous medical relief to greater proportions than it has now reached? The Mayor of Birmingham, in presiding over the Charity Organisation Society, has called attention to a tabulated statement compiled in 1876, which showed that in twelve medical charities there were 93,421 out-door patients in one year. This, taking the population of the town at 300,000, was one-fourth of the whole population! Surely it is high time that the medical profession should decide on some steps to abate this gross wrong, and carry them out with the least possible delay.

The annual meeting of the governors of the General Hospital was held last week under the presidency of the Hon. A. Calthorpe. The report shows that 2032 in-patients and 23,177 out-patients were attended to during the past year, that the daily average of patients was 211, and that the cost of each bed per annum was £55 11*s.* 2½*d.* The financial statement was very satisfactory. Two assistant-physicians and two assistant-surgeons, with an obstetric officer, have been added to the staff during the year, and the appointment of an ophthalmic and also of a dental officer is contemplated. In accordance with the unanimous wish of the committee and medical staff, Dr. Bell Fletcher was appointed consulting physician to the hospital.

The annual meetings of the governors of the Children's Hospital and of the Orthopædic Hospital have also recently taken place. The former has opened a new infectious department, and increased its beds from 54 to 66, and the latter has moved into larger and more commodious premises, and is about to open an in-patient department.

The new Central Coroner's Court appears to give satisfaction alike to the profession, the public, and the coroner.

Feb. 25th, 1878.

PARIS.

(From our own Correspondent.)

THE LATE CLAUDE BERNARD.

THE funeral of Claude Bernard, which took place on the 16th inst., was one of the most imposing manifestations of the glory and value of science that I have ever witnessed in this country, and it did honour both to the *savant* whose loss was thus publicly lamented, and to all who took part in the ceremony. The service was celebrated with great pomp in the church of St. Sulpice. This large sacred edifice was filled to overcrowding, whilst on the place outside an immense crowd had assembled to witness the *cortège*. Deputations from all the scientific bodies of France, from the Senate and Chamber of Deputies (who had voted that the funeral should be considered a national ceremony), from the Sorbonne, the Collége de France, the Museum, the two Academies to which Claude Bernard belonged, the professors of the School of Medicine, &c. &c., were present on the occasion. Immense crowns of flowers and laurels, with appropriate inscriptions, were sent from various scientific corporations and delegates of the house-surgeons of Paris; the School of Pharmacy, &c., were appointed to carry them. It would be impossible to give the names of all the scientific and literary notabilities whose presence I observed at the ceremony. The chief mourners were the Prime Minister, M. Dufaure; the Minister of Public Education; M. Laboulaye, the Senator; and M. Mezières, of the French Academy. After mass was ended, the *cortège* proceeded to the cemetery of Père Lachaise, where various discourses, celebrating the

fame and glory of the lamented Claude Bernard, were delivered over his tomb. Altogether his death has been considered quite a national loss, and has been marked as a great event not only in the scientific circles, but throughout the whole country.

Amongst various schemes in contemplation for perpetuating the memory of Claude Bernard may be mentioned the subscription which is now being got up by the Biological Society, for a statue, or at least a bust, of the great *savant*. I may also mention that the Minister of Public Education has entrusted the eminent sculptor Iselin with the task of making a marble bust of Claude Bernard, to be placed in the gallery of national celebrities at Versailles.

BANQUET OF THE CLINICAL SOCIETY OF PARIS.

On Saturday last the Clinical Society of Paris met at the well-known restaurant of Brébant's to celebrate in a banquet its second anniversary. Professor Peter presided, and the convivialities, thanks to the skill and excellent arrangements of Brébant, were one uninterrupted flow of cheerfulness and enjoyment. Two or three toasts, not more, but excellent, and quite to the point, were drunk, and all present felt proud of the brilliant success of this new society, which numbers in its ranks so many of the best scientific workers in the medical field of Paris.

Paris, Feb. 27th.

Obituary.

EDMUND RANDOLPH PEASLEE, M.D., LL.D., OF NEW YORK.

THIS distinguished physician and eminent American gynæcologist died Jan. 21st, at his residence, Madison-avenue, New York City, after an illness of only six days' duration. A week before his death he was requested and urged to visit a patient in the country, who was dangerously ill. Yielding to the dictates of his kindly nature, he obeyed the call, and was obliged to ride a long distance in an open waggon, exposed to the rigorously cold and inclement weather of a northern winter. Soon after his return he was suddenly seized with alarming symptoms, the precursors of an attack of pneumonia, involving the right lower lobe, to which he finally succumbed.

Dr. Peaslee was born at Neutow, New Hampshire, in 1814, and, if he had lived a day longer, would have been sixty-five years old. He graduated from Dartmouth College, New Hampshire, in 1836, and remained there as a tutor of Latin until the year 1839, when he commenced the study of medicine. After the completion of his medical studies, he was elected Professor of Anatomy and Physiology by the Faculty of Dartmouth Medical College. In the following year he was chosen to occupy the chair of Anatomy and Surgery at Bowdoin College. In the year 1851, Dr. Peaslee was appointed Professor of Physiology and General Pathology at the New York Medical College, and in 1860 he accepted the chair of Obstetrics in the same institution. In 1874 he was elected Professor of Gynæcology in the Bellevue Hospital Medical College. This professorship, although previously united to another, was at this time individualised to bestow upon Dr. Peaslee a well-merited honour, and one which his skill and attainments in this department of science had forced upon him.

But Dr. Peaslee's career as a lecturer is not the only one which makes the study of his life interesting and instructive, since he shone with equal brilliancy as an author and as an ornament to the profession in which he practised with such fidelity to others and with renown for himself.

The masterpiece of his life is undoubtedly his classic work entitled "Ovarian Tumours and Ovariotomy," which he completed in 1872. In this book, which has extended his name throughout the civilised world, and has been translated into the German and other languages, is found the rich experience of a life which was devoted to the study and practice of this department of surgery. In these writings, extending over 500 pages, are embodied the principles which should guide operators in this domain of surgery, and are those which have been generally adopted by the most distinguished gynæcologists. The work is notable for the clearness of its thought, the precision of its style, and the valuable and original contributions it contains. It is, as an American surgeon and author has justly said, an enduring monument to his name, and one which will doubtless remain and do him honour as long as the healing art is practised. The work attempts to vindicate the right of America, not only to the renown of the discovery, but also to the claim of having originated the methods of this operation. The book is dedicated to Dr. Ephraim McDowell, of Danbury, Kentucky, who was the first to perform the operation of ovariotomy. Dr. Peaslee was also the author of a work entitled "Human Histology in its relations to Descriptive Anatomy, Physiology, and Pathology," and contributed largely to the medical periodicals of the day.

Dr. Peaslee was President of the Pathological Society, of the New York County Medical Society, of the Academy of Medicine, and of the American Gynæcological Society; attending surgeon of the New York State Woman's Hospital, consulting physician to the Strangers' Hospital, Corresponding Fellow of the Obstetrical Society of Berlin, Corresponding Fellow of the Gynæcological Society of Boston, and honorary member of the Louisville Obstetrical Society.

Dr. Peaslee's private life was adorned with all the homely traits which refinement and culture, warmed by the impulses which a loving and generous heart could bestow, while his professional career was a series of sacrifices to the demands of a sensitive conscientiousness and a fervent sympathy for all in bodily or mental affliction. His faithfulness and unselfishness in the discharge of duty are the secrets of that love which drew so many together at the funeral service to mourn a public loss and express a common grief.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen have been admitted Licentiates of the College:—

Battye, John Howard, St. George's-road.
Bennett, William Charles Storer, George-street, Hanover-square.
Blaxland, Herbert, University College Hospital.
Chawner, Alfred, Addison-road, Kensington.
Coates, Harcourt, Granby-street.
Griffith, Charles William, Station Hospital, Dover.
Harris, George Francis Angelo, Sutherland-gardens.
Pearse, Thomas Frederick, Haverstock-hill.
Pointon, James, Birkenhead.
Ritchie, Arthur Fisher, Charlotte-street.
Sykes, John Frederick Joseph, Fitzroy-square.
Turner, George Robertson, Sussex-gardens.

BRITISH MEDICAL SERVICE.—The following is a list of candidates who were successful for appointments as Surgeons at the examination held in London in February:—

	Marks.		Marks.
J. Stevenson	1970	M. D. O'Connell ..	1385
A. J. Landon	1939	P. J. Dempsey	1372
J. W. H. Flanagan	1690	A. Harding	1355
W. L. Lane	1605	J. F. Dowman	1335
W. P. Feltham ..	1578	H. R. Cross	1305)
K. S. Wallis	1535	A. S. W. Young ..	1305)
W. Leah	1520	H. J. Noad	1245
J. L. Ritchie	1505	J. G. Mac Neece ..	1225
C. Seymour	1390	J. J. Falvey.	1205

INDIAN MEDICAL SERVICE.—The following is a list of candidates who successfully passed the recent examination for appointments:—

	Marks.		Marks.
J. J. Mullen	2710	S. F. Bigger	1800
E. Cretin	2383	G. M. Nixon	1783
A. Duncan	2123	T. E. Worgan	1775
A. Hemsted	2011	J. J. Moran	1727
J. S. Biale	2008	D. P. Warlikar	1726
G. A. Cones	2005	F. C. Smith	1695
G. F. Nicholson ..	1960	J. H. Earle	1615
T. H. Pope	1931	P. J. Damania	1610
R. Pemberton	1955	G. H. Bull	1580)
G. S. Robertson ..	1900	W. A. Quayle	1580)
D. A. Gomes	1869	C. N. Carruthers ..	1565
C. Monks	1848	H. Armstrong	1540
J. E. Walsh	1833	F. F. Mac Cartie ..	1525

(One appointment subsequently added.)

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Feb. 21st:—

Haslam, William Frederick, Reading.
Pearse, Thomas Frederick, Haverstock-hill.
Philpot, Joseph Henry, South Eaton-place.
Shaw, George, Blackheath-park.
Warren, Charles Edward Henderson, Holywell, Flintshire.

The following gentlemen also passed the Primary Professional Examination :—

John Arthur Diggle, Manchester Hospital; Robert Shafto Hawks and John Sydenham Walker, St. Bartholomew's Hospital; Harry Boyle Rummalls, St. Mary's Hospital; Henry John Skelding, University College Hospital.

A MAN named John Higgins died last week near Killaloe at the alleged age of 105 years.

THE Town Council of Faversham have at length, after receiving a third letter from the Local Government Board, decided to appoint a public analyst.

MR. RALPH BROCKLEBANK, a Liverpool shipowner, has offered to defray the whole cost of a sanatorium for the Liverpool Seamen's Orphanage, £3500.

THE late Mrs. Brocas having left £200 to the Meath Hospital, Dublin, a bed to be called the "Brocas Bed" will be founded in memory of her deceased brothers.

HEALTH OF DUBLIN.—That the sanitary condition of Dublin is unsatisfactory is plainly shown by the high mortality that exists. Taking the past two weeks, we learn that the deaths exceeded the births by no less than 78, showing an annual death-rate of 33 and 35·5 respectively in every 1000 of the population.

BEQUESTS, &C., TO MEDICAL CHARITIES.—The Sussex County Hospital, Brighton, has received £300 under the will of Miss Carpenter Smith; the Longton Cottage Hospital £150, under the will of Mr. Jacob Stanley, of Hanford; the Leicester Infirmary £100, under the will of Mr. John Johnson. The Fishmongers' Company have given £50 to the Royal Infirmary for Children and Women, Waterloo-road.

PRESENTATIONS.—Drs. John Brown and Alexander Peddie, of Edinburgh, have each been presented with a solid silver tripod centre-piece, containing a figure of Æsculapius under a top supported by Corinthian columns. The presentations were made by a deputation from the Foreign Mission Board of the United Presbyterian Church, as the gift of a few friends, in recognition of "inestimable services gratuitously afforded for more than a quarter of a century, in testing and conserving the health of their missionaries, and thus rendering his beneficent profession the handmaid of saving health among all nations."

NATIONAL HOSPITAL FOR CONSUMPTION.—The Earl of Carnarvon presided on the 20th ult. at the biennial dinner, at Willis's Rooms, in aid of the funds of the National Hospital for Consumption, Ventnor, and the company numbered 120 ladies and gentlemen. The chairman, in advocating the claims of the hospital to public support, adverted to the new system inaugurated by it, in providing every patient with a separate sleeping apartment, and giving them the comforts of home life. This, he remarked, entailed undoubtedly increased expense, but the results had been most satisfactory. The secretary read a list of subscriptions collected, amounting to nearly £1800.

Medical Appointments.

ARMSTRONG, H. G., M.R.C.S. & L.S.A., has been appointed a Surgeon to the Reading Provident Dispensary, on augmentation of staff.

BAKER, F. G., M.R.C.S., L.R.C.P., L.S.A., has been appointed from Junior to Senior House-Surgeon to the Birkenhead Borough Hospital, vice Cretin, resigned.

BUZZARD, F., M.D., has been appointed a Physician to the Northampton General Infirmary, vice Francis, resigned.

COLEY, F. C., L.R.C.P.L., M.R.C.S.E., has been appointed House-Physician to the Hospital for Women, vice Hellier, whose appointment has expired.

COOKE, E. M., M.B., M.R.C.S.E., has been appointed Medical Superintendent of the Wilts County Lunatic Asylum, Devizes, at £600 per annum, furnished apartments, &c., vice Burman, resigned.

CROOK, Mr. W. G., has been appointed Public Analyst for Norwich.

FLETCHER, T. B. E., M.D., F.R.C.P.L., has been appointed Consulting Physician to the General Hospital, Birmingham.

HOWELL, H. S., M.D., L.R.C.P.L., F.R.C.S.E., has been appointed an Honorary Surgeon to the Western General Dispensary, Marylebone-road, vice Baker, resigned.

JONES, V. D. W. B., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the No. 4 or Llanboidy District of the Narberth Union, at £35 per annum and fees, and Medical Officer of Health for the Llanboidy Sub-district of the Narberth Rural Sanitary District, at £10 per annum, vice Croswell, deceased.

LEE, H., F.R.C.S.E., has been appointed a Consulting Surgeon to St. George's Hospital, on resigning as Surgeon.

MACLAUGHLIN, F. P., M.B., C.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Strangford Dispensary District of the Downpatrick Union, vice Chartres, resigned.

MORGAN, T., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Berriew District of the Forden Union, Montgomeryshire, vice Cockerton, deceased.

PERKINS, E., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer to the Grosvenor United Sick and Burial Society, Manchester, vice Wilson, deceased.

PHILPOT, J. H., M.D., M.R.C.S.E., has been appointed an Attending Medical Officer to the Royal Pimlico Dispensary, vice Oates, resigned.

PICK, T. P., F.R.C.S.E., has been appointed a Surgeon to St. George's Hospital, vice Lee.

PICKFORD, J. K., M.R.C.S.E., has been appointed Assistant House-Surgeon to the Nottingham General Dispensary, at £160 per annum, furnished apartments, &c., vice Osborne, appointed House-Surgeon.

STIRLING, E. C., M.B., F.R.C.S.E., has been appointed an Assistant-Surgeon to St. George's Hospital, vice Pick.

TAYLOR, G. G. S., M.R.C.S.E., L.K.Q.C.P.I. & L.M., has been appointed Honorary Assistant-Surgeon to the Liverpool Hospital for Cancer and Skin Diseases.

THOM, A., M.B., C.M., has been appointed Resident Medical Officer to the General Hospital and Dispensary for Sick Children, Pendlebury, Manchester, at £100 per annum, residence, board, &c., vice Neill, appointed Junior Physician.

WISE, N. V., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Certifying Factory Surgeon for Trowbridge, vice Miller, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BATTERSBY.—On the 19th ult., at Wellington-road, Dublin, the wife of Henry J. Battersby, M.B., C.M., of Omard, of a daughter.

BIRT.—On the 24th ult., at The Boltons, Tregunter-road, the wife of Louis F. H. Birt, Esq., Surgeon, of twins (still-born).

BROOKES.—On the 18th ult., at Kennington-road, the wife of Robert Charles Brookes, M.R.C.S., of a son.

CORE.—On the 19th ult., at Abbotsford-place, Belfast, the wife of William Scott Core, M.D., of a son.

FARINGTON.—On the 21st ult., at Penshurst, the wife of William H. Farington, M.D., of a daughter.

FORD.—On the 17th ult., at Croft House, Kingston-cross, Portsmouth, the wife of Arthur Vernon Ford, L.K.Q.C.P.I., of a son.

GIRAUD.—On the 23rd January, 1878, at Belgaum, S. Mahratta Country, India, the wife of Surgeon-Major Byng F. Giraud, Army Medical Department, of a daughter.

MAIR.—On the 22nd ult., at Egmere House, Ledbury-road, Bayswater, the wife of Robert S. Mair, M.D., of a son.

WILTSHIRE.—On the 22nd ult., at Wimpole-street, the wife of Alfred Wiltshire, M.D., of a son.

MARRIAGES.

CROFTS—WISE.—On the 21st ult., at Aldershot, Freeman Wills Crofts, M.B., Surgeon, Army, to Cecilia Frances, daughter of J. L. Wise, Esq.

FORT—MELLOR.—On the 20th ult., at the Parish Church, Oldham, by the Rev. A. J. J. Cachemaille, M.A., Thomas Fort, M.R.C.S.E., L.R.C.P., & L.M., to Annie M. Mellor, youngest daughter of the late Joseph Hague Mellor, of Falcon House, Oldham.

DEATHS.

ANDREWS.—On the 22nd ult., at Walton-park, Walton, Liverpool, George Andrews, L.R.C.P.I., M.R.C.S.E., L.S.A., aged 33.

ARMSTRONG.—On the 30th January, at Manor-Hamilton, Christopher Armstrong, M.B., aged 33.

BOOTH.—On the 19th ult., at Lower Sherrard-street, Dublin, Daniel Booth, L.R.C.P.Ed., aged 36.

GURDON.—On the 3rd ult., at Hadleigh, Suffolk, Theophilus Goate Gurdon, M.R.C.S.E., aged 64.

LLOYD.—On the 14th ult., at Llangeful, John Hughes Lloyd, M.D., aged 64.

MILLER.—On the 11th ult., at Hulme, Manchester, Charles Miller, L.R.C.S.Ed., aged 75.

MONCK.—On the 15th ult., at Hucknall, Notts, Charles Edward Beresford Monck, L.R.C.S.I., aged 38.

MUNGALL.—On the 23nd ult., at Foulford House, Cowdenheath, Fifeshire, Robert Mungall, M.D.

NAIRNE.—On the 22nd ult., at Kennington-road, Charles Nairne, M.R.C.S.E., aged 73.

THOMAS.—On the 18th ult., at Horton, Yorkshire, Abraham Thomas, L.S.A.L., aged 79.

[N.B.—*A fee of 2s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

E. G. Banner: Wholesome Houses; being an Exposition of the Banner System of Sanitation.
J. R. Protyman on Depauperisation.
W. Stolz: Asiles d'Accouchement de la Ville de St. Pétersbourg.
The Cabinet Lawyer.
Industrial Art. Vol. I. 1877.
Dr. R. Virchow: The Freedom of Science in the Modern State.
Dr. Ringer: A Handbook of Therapeutics.
G. Brown: Aids to Surgery. Part I.
Dr. J. Coxe: Lunacy in its Relations to the State.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, FEB. 28TH, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 22	30·03	W.	48	50	..	52	43	..	Foggy
,, 23	30·46	W.	46	48	..	52	46	..	Overcast
,, 24	30·22	N.W.	47	49	..	51	44	..	Cloudy
,, 25	30·13	W.	44	46	..	55	44	..	Cloudy
,, 26	30·12	W.	46	48	..	53	43	..	Cloudy
,, 27	29·99	S.W.	44	47	..	52	44	..	Overcast
,, 28	29·94	W.	49	51	..	..	45	0·08	Overcast

Notes, Short Comments, and Answers to Correspondents.

THE SANITARY CONDITION OF PLYMOUTH.

PLYMOUTH has had an unenviable notoriety for some time past as being an exceptionally unhealthy town, when we consider its favourable position and freedom from any special manufactures which should increase its death-rate; and these circumstances were very freely referred to by many members of the British Association of Science when they visited it last summer. Typhoid fever and scarlet fever prevailed throughout the year, and scattered cases of diphtheria were also met with. In October and November last this disease became epidemic, and it still prevails, for four fatal cases at least occurred during the past month. At first the epidemic was supposed to have been spread by milk; but a searching investigation by Dr. Buzzall has quite disproved this supposition. In two or three cases the disease extended through the medium of schools; but the main causes of its severity were, as usual, overcrowding and exposure to emanations of sewer-gas. The local authorities have, therefore, determined to thoroughly ventilate the sewers, and propose calling in some eminent engineering authority to decide as to the best means of doing this. In addition to this, it will be necessary for the inhabitants to pay more attention than they do at present to the ventilation of the soil-pipes in their private dwelling-houses, for this is very defective, and unless attended to, will greatly stultify the efforts of the authorities. There is no proper hospital for the reception of infectious diseases, and the overcrowding in some districts is extreme. There is evidently much to be done before Plymouth can be considered a satisfactory residence from a sanitary point of view, and it might with advantage follow Devonport and Exeter in applying the Artisans' Dwellings Act in the worst parts of the town.

M.D. Paris.—The Archbishop of Canterbury has special powers to confer degrees. When the function is exercised, the qualification becomes legal.

Professor Cassells.—We shall be glad to receive the article proposed.

RUPTURE OF AORTIC ANEURISM INTO THE PERICARDIUM.

To the Editor of THE LANCET.

SIR,—Having read in your journal the report of the meeting of the Pathological Society of November 6th, at which meeting the rarity of rupture of aortic aneurism into the pericardium was mentioned, and also the question discussed as to the probability of sudden death occurring after such an event, I have thought the following case might be of interest.

In September last, late at night, a drunken brawl took place between a Hottentot, who had previously been under my treatment for aortic aneurism, and a strongly-built, apparently healthy Kaffir, in the course of which the Kaffir received several blows on the chest. After this the Kaffir walked to his hut, which was close by, lay down on his bed, and in the morning was found dead by another man who was sleeping in the hut, and who was not aware that anything was the matter with him.

On making an examination, the pericardium was found distended with blood. On the front of the aorta, about an inch and a half above the aortic valves, was an aneurism, which was about the size of the end of a thimble, and hemispherical in shape. At its most prominent part was a rent not more than one-eighth of an inch in length. The parietal portion of the serous layer of the pericardium opposite the aneurism presented a thickened patch about three-quarters of an inch in diameter. The aorta was affected with atheromatous degeneration for about two inches from the valves upward.

In this case it would appear probable that death did not occur suddenly.

The Hottentot died in gaol two months afterwards suddenly, after suffering great pain for two days. In his case there was an aneurism springing from the upper part of the arch of the aorta as large as the head of a child at birth. The upper part of the sternum was eaten through. Death occurred from rupture into the left pleural cavity.

Syphilis is extremely common amongst the coloured population here; but I am not able to say whether either of these men had suffered from the disease. Yours &c.,

A. W. HARDING, B.A., M.B. Lond.

Carnarvon, Cape Colony, Dec. 29th, 1877.

UNPOPULAR DISINFECTION.

THE prudence with which sanitary principles must be enforced cannot be better illustrated than by an incident which is reported to us from Salford. The authorities here had announced that they were prepared to disinfect clothing, bedding, and other articles free of charge. Unfortunately an individual, who had availed himself of these advantages, wrote an angry letter to the *Manchester Guardian*, complaining that the authorities claim the right to destroy the articles brought to them, and will not allow compensation. We quite admit that destruction is often the only safe method of disinfecting accumulations of rags and dirt; but, in this case, the sufferer complains that the articles destroyed were worth from £5 to £6. A statement of this description is most likely to affect persons who are not sufficiently educated in sanitary matters to realise that the prevention of disease, at any cost, is the best economy. It should not have been passed over without either explanation or contradiction. Let us look at the consequences. The *Manchester Guardian* now receives a letter from another correspondent, who relates that, though scarlet fever has wrought sad havoc in his family, he will not have his clothes &c. disinfected for fear they should be destroyed, and adds that he has consequently sent his blankets, sheets, and linen to the wash, but does not know what to do with the beds! Here is another instance, therefore, of the dangers that attend laundry work. It seems to us that the officer of health should make an example of these two correspondents. He should vindicate his conduct in destroying the articles belonging to the first, and should prosecute the second, under the Sanitary Act, for exposing infected articles by sending them to the laundry. At the same time the officer of health is himself to blame for not counteracting what we cannot but presume to have been a false impression, spread by the press, concerning the disinfection of clothes &c., and their probable destruction.

Hygiene.—We are not aware. The Inland Revenue Office might supply such a list.

"PUERPERAL PYREXIA."

To the Editor of THE LANCET.

SIR,—Though I cannot pretend to anything like the experience of those gentlemen who have written to you on this subject, yet, as a case of this kind came under my notice, the broad facts of which I think would be interesting just now, I send you an abstract of it.

I was called one evening to see a woman who was "bleeding." It proved to be a case of abortion. On the third day fever set in with diarrhœa; the temperature was at 102°, and pulse at 120. There was pain over the womb and in the right hip. As I never heard of quinine in this affection, I merely acted on the diarrhœa. Ordered frequent warm-water injections and linseed-meal poultices. On the fifth day the patient was much worse; temperature 104·4°; pulse so quick and intermittent that I could not count it, and the tongue raw and glazed. The woman appeared bad enough to die, and it was questionable whether any medicine would act beneficially. Though I cannot say now what suggested quinine to my mind, I ordered ten grains with one-eighth of a grain of morphia, and five grains with one-eighth of morphia six hours afterwards. Next morning the patient was much better; the temperature was at 101°, and the pulse at 120. During this day (the sixth) no medicine was given. On the seventh day the temperature went up again to 103·2°, and the pulse to 136. Quinine was ordered in five-grain doses every six hours with one-eighth of a grain of morphia. By evening the temperature had fallen two degrees, and the pulse counted 120. From this time the quinine was continued in small doses; there was no other accession of fever, and the woman ultimately recovered, though she had a tedious time of it.

No one, I imagine, can doubt the effect of the quinine on the temperature in this case, and, as regards myself, I believe it saved the patient's life.

In conclusion, I may mention that the husband got an attack of glossitis while attending her, which probably was due to septicæmic poisoning consequent on his close attendance.

Yours truly,

H. JAGOE, M.B.,

Waterford, Feb. 18th, 1878. Surgeon, A.M.D.

CO-OPERATIVE STORES AND MEDICAL MEN.

WE are not prepared to say that medical men should be prohibited from entering into arrangements with stores for attending members on reasonably advantageous terms. The question is a complicated one, upon which we may have something more to say. But, in the meantime, any medical man entering into any such arrangements should be careful to stipulate that his name merely and qualifications should be mentioned. We have before us the price-list of a store, in which the most elaborate advertisement appears of the arrangements, including the fact that the medical man will attend at the store three days a week, which seems rather shoppy; that he will vaccinate with *pure lymph only*, as if other medical men used other lymph, and conveying generally the idea that medical services and "pure lymph" may be advertised on one page, opposite to another page with advertisements of hair-washes, dentifrices, tooth-brushes, &c. &c. We should be glad to hear that the medical man in question had protested against this undignified appearance of his name.

Morphea.—The quantity mentioned was certainly large, especially for a first dose, and in the case of a stranger; but, without knowing all the facts, we could not properly pass any further judgment on the prescription. It is also true that larger doses of the drug than are usually administered may be given with impunity.

DUST AND DIPHTHERIA ON WANDSWORTH-COMMON.

WANDSWORTH-COMMON, after many struggles, has been preserved from the encroachments of builders and speculators, and the Association formed for this purpose now boasts that it has secured a health-giving resort, open free, to all the inhabitants of Wandsworth, Battersea, and Clapham. Unfortunately visitors will find that, by the side of one of the principal approaches to this open space there is a gigantic dust-heap, which must impair at once the æsthetic and sanitary advantages of the common. The heap, consisting of the dust gathered from the Battersea parish, measures about a hundred paces in length, varies in width from fifteen to thirty feet, and is ten to twelve feet high. Vegetable and animal matter is there allowed to rot and ferment for months together—in fact, it remains untouched till the opening of the brick-making season, when this dust is sifted and carted into railway trucks, which stand on a loop-line running up to the dust-heap. Immediately beyond this line is situated the Patriotic School, where upwards of two hundred orphan sons of soldiers and sailors are educated. On the other side of the dust-heap there are a few houses standing, for the most part, on a strip of ground sold by the Brighton Railway Company to speculative builders. Here diphtheria broke out in three different families during last year, and, as probably not more than twelve houses were inhabited at the time, this may be looked upon as a serious matter. The cases were also of a very virulent type, and only one life was saved. One of the patients lived in a hut situated in the midst of the dust-heap, and worked there; but the others were living in the comfortable villas close at hand. One of these houses has been selected for the Good Templars' Orphanage, and is only separated from a real mountain of obnoxious refuse by the roadway. It is along this path also that the children pass on their way from the Freemasons' School, which is close at hand, to the common, where they are supposed to enjoy healthy games. When we remember that Wandsworth has been recently visited by a violent outbreak of fever, that the dust from many a fever den is hoarded on the outskirt of this common, we question whether it has always been a source of health to its frequenters. In any case, the three instances of diphtheria, occurring in the few houses that are in the immediate vicinity, suggest that so great an accumulation of dirt is not safe. It is also absurd to remove dust from thousands of dwellings, to urge upon their inhabitants that they endanger their health by keeping this dust, and then to store it wholesale and for months in the very front of other houses, so that it blows into their windows and infects their rooms. We hope the local authorities will see to this matter, and redeem the common from this dangerous, unsightly, and malodorous intrusion of dust and dirt.

Dr. Hugh Müller's paper will be published at an early date.

THE UNIVERSITIES OF GLASGOW AND MELBOURNE.

To the Editor of THE LANCET.

SIR,—Your correspondent, "Scotsman," having given one side of the story, will you kindly allow me to offer a few remarks on the other? I pass over what is irrelevant, or perhaps intended for sarcasm, in his letter, as merely evidence of the state of mind in which he wrote, and will endeavour to show that the Melbourne University has at least some ground of complaint. To obtain the degree of M.B. from that University, it is necessary for the candidate to pass a matriculation examination, and subsequently complete a curriculum of five years, and pass five examinations, one at the end of each year; but should he fail to pass, the year does not count, and must be gone over again. Now, this is what one might term a little "stiff," particularly when you consider that no inconsiderable number of candidates fail at the end of one year or another, some more than once, and thus may be seven or eight years at the University before "qualifying."

Not many years ago a few candidates who had failed in the above way came to England to "remedy" matters. They applied to the College of Surgeons of London, the Universities of Edinburgh, Glasgow, and one or two, I believe, went to Dublin to try the Queen's University and Trinity College. At each of these institutions, with one exception, they were informed that any certificates they held of lectures attended or time served would be accepted so far as they went, and that upon complying with the regulations and passing *all* the professional examinations they would be granted qualifications to practise. At Glasgow, however, their reception was of a warmer nature. Here they were told that if they were third-year's men, and had passed the first two examinations at the University of Melbourne (which, as we shall presently see, are almost non-professional), these would be accepted in lieu of the first two professionals in Glasgow, and that if they were willing to spend one winter session there they would be admitted to the final examination for M.B. and C.M. Of course they were delighted; the good news quickly spread, and reached the ears of others like them, who were making praiseworthy, although repeated, efforts at the Melbourne third and fourth year's examinations. The result of this was that every Melbourne student who failed for his third (and some who did not care to face it) set sail for the Clyde, and having spent one session there, and passed his final examination, went back to the antipodes a full-blown Bachelor of Medicine and Master of Surgery before his non-successful seniors in Melbourne had even time to get simple Bachelor without the Master.

But let us now see what professional education these men get in Melbourne who take advantage of the above opportunity. The first year of so-called medical study in the University of Melbourne is devoted to Arts subjects exclusively—viz., Classics, Natural Philosophy, and Chemistry. The second year is also non-professional, with the exception of a little junior Anatomy, and it is really only in his third year that a Melbourne student enters upon the professional part of his career, and devotes himself to the work done by a first year's man at one of the London schools—viz., he attends a hospital, reads Anatomy, Physiology, Materia Medica, &c. Having got so far, he can now betake himself to Glasgow, and, whether he has passed his third year's examination in Melbourne or not, is admitted to the M.B. C.M. examination after attending one session. Now, if he *has passed* his third year's examination in Melbourne, he is only on a par with a second year's man in this country, and would yet take two years, even supposing he were successful, to qualify in Melbourne; but he goes to Glasgow, and is dubbed M.B. and C.M. in six months. But what if he *fails* for his third year in Melbourne? He is then no better than a first year's man here, and is still in his second year in the Melbourne school, because, as I have explained, the year he has just completed goes for nothing, and it would, therefore, take him three years more to qualify there. However, he goes to Glasgow, presents his certificates of having passed two junior examinations in the colonial University. These are accepted. He is exempted from the first two professional examinations in Glasgow University, and is considered by the authorities there on a par with their fourth-year's students. He attends six months, and if he passes their "final," and pays about twenty guineas, he is admitted to the degrees of M.B. and C.M. at the end of what would equal his Melbourne third year. I have heard of several men who have taken advantage of this rather rare opportunity. One man was recently granted the title of M.B. who failed once for his first year in Melbourne, twice for his second, and two or three times for his third. He then gave it up in despair, came to Glasgow, and, with what I presume must be put down to extraordinary good luck, passed his final M.B. in six months, and on first trial. This man goes back to Australia, and, with his other lucky companions, will, no doubt, claim to be admitted *ad eundem* in the University which showed him so little mercy!

I think, Sir, that proceedings such as the foregoing are not calculated to raise the Glasgow degrees in the estimation of anyone, much less Melbourne men. It is certainly a "little" odd that it should exempt candidates from its examinations in this manner, while other British Universities, more mindful perhaps of the reputation of their degrees, refuse to do so; and if the institution in "swaddling clothes" is allowed to set her more mature sister the example of endeavouring to maintain a high standard of medical education, at least among our Victorian cousins so much the worse for the mature sister. It is no argument to mention the names of the celebrated men that are or have been connected with the northern University, and no one will attempt to compare them with the teachers in the University of Melbourne, however estimable and earnest these gentlemen may be in their own way; but great men, it may be added, do not necessarily mean great teachers or severe examiners; besides, great men have not always the framing of University regulations.

Again, no one will care to assert that the resources for teaching in Melbourne are equal to the home schools; but, be the teaching what it may, it is patent that one cannot profit much by it in a few months, and that in order to pass a professional examination, such as one would expect the "final" for the degrees of M.B. and C.M. to be, in so short a time, recourse must be had to systematic "cramming," and such superficial knowledge is surely not sufficient to carry a man through his career with credit to himself or the profession to which he belongs; nor is he likely to shed lustre on the institution which gave him the title to practise, or the one which admits him *ad eundem*.

I am, Sir, your obedient servant,

Feb. 18th, 1878. CANTAB.

A CORRESPONDENT writes to us:—"The concluding address in the Health Department of the Social Science Congress held in Aberdeen in September last, delivered by Mr. Edwin Chadwick, C.B., has just been published. In it he criticises very severely the arrangements here for working the Public Health Act. He says: 'I find that a public health officer is appointed [in Aberdeen], with a salary of £50 a year.... This displays the common state of knowledge ruling in local administration. A hundred a year, including some extra emoluments, is deemed sufficient remuneration for looking after the health of ninety or a hundred thousand of population!.... The arrangement, in fact, is one that puts his interest violently away from the duty that belongs to a preventive service.... It has got to be learned in local administration how much better it is to have one man's whole time, that time exclusively devoted to his duties, than three men's third time, or than half-a-dozen men's sixth time, as we have here, and interests only in the most perfunctory service.' He then proceeds to point out the advantages obtained elsewhere from the services of a fully qualified officer of health, devoting himself exclusively to preventive medicine. The address was brought up at a meeting of the Town Council as local authority, held on Monday, and referred to a Committee to consider and bring up a report on. It is to be hoped that the Committee's report will be such as to induce the Council to put the provisions of the Public Health Act into force in a full and efficient manner, and not rest content with the sort of half-and-half style of working which has hitherto been deemed sufficient."

H. M. D.—1. We should think so.—2. Certainly, in the winter.—3 and 4. Works on the climates of different places are often not reliable. It is better to form one's own opinion on general principles. We should recommend Sir James Clark's work on Climate; the chapter on "Climate" in Parkes's Hygiene; the article "Climate" in the Encyclopædia Britannica; or Macpherson's "Baths and Wells of Europe."

Mr. F. Treves.—The length of the communication has hitherto proved a bar to its insertion, but it will appear shortly.

C. S. B. should apply to the Secretary of the Army Medical School, Netley.

CHOLERA IN THE 8TH REGIMENT, N.I.

MR. SCOTT REID, M.B., in medical charge of the 8th Regiment, N.I., has published a report on a slight outbreak of cholera which occurred in the corps while stationed at Agra. Four sepoys were attacked, of whom one died; and two female camp-followers were also seized, one succumbing to the disease. The sanitary condition of the lines and station generally was good, the bazaars and latrines being frequently inspected, and any irregularities found reported and corrected. Mr. Reid excludes contagion and water pollution as factors in the production of the outbreak, and is inclined to believe in the atmospheric conveyance of cholera. With regard to treatment, the patients were at the outset given diffusible stimulants and astringents, with sinapisms to the epigastrium. With a view to restore the circulation, friction with dry ginger and turpentine, the application of hot-water bottles to the body and limbs, and in one instance a hot bath, were resorted to. In two of the cases ten grains of chloral hydrate were given subcutaneously with good effect, while inhalation of chloroform was also tried. The administration of the anæsthetic was frequently repeated, but not pushed so far as to produce insensibility. This treatment was apparently highly successful; the pulse improved under its influence, spasm was relieved, restlessness abated, and the patient passed into an easy sleep. Mr. Reid places faith in the chloroform treatment, and regrets that it was not resorted to in the fatal cases. It should be stated that all the patients were treated in huts pitched some distance from the lines.

Dr. Wallace.—We think it undesirable.

MEDICAL REFORM.

To the Editor of THE LANCET.

SIR,—No doubt it will be desirable that various members of the profession should be permitted to express their views regarding the Medical Bill brought in by Mr. Errington, and to consider in the columns of the journals whether it makes for or against their interests.

Allow me, then, to express very great regret that your powerful influence should be used against this, as it seems to me, most desirable measure.

There are two important interests to be considered—

1st. That of the public, which must be admitted to be supreme.

2nd. That of the profession.

Now, as regards the first, surely it cannot be denied that medicine and surgery are so closely allied that no one can be competent to undertake practice in either unless qualified in the other; while, nevertheless, a number of isolated qualifications allow a man to commence practice on the public with half knowledge, and conjoint schemes are still proving abortive all around us, and indeed in any case could have no effect on the action of licensing bodies which might decline to join them. There are some corporations which nothing will move except a *vis à tergo*.

Then as regards the profession. Nothing astonishes me more than the apparent failure of the profession to see that the economical law of supply and demand must necessarily regulate the value of its services. The question of their intrinsic value does not even enter into the problem. Air is the most precious thing on this earth, but who would think of paying for it so long as he can get it for nothing? But limit the supply of it, and then no price will be too high to ask for it. Just so as regards our services: so long as half-qualified men, uneducated men, men professionally ignorant, and unqualified assistants flood our ranks, so long we shall in vain seek for higher remuneration for our services; and a vast number of such persons enter our ranks by means of the *point d'appui* afforded them by the Poor-law medical service in England. The Indian service will have none of them, nor the navy, no not even the army; they all test competence by a special examination, and nothing else will exclude them from entering by the door of civil employment. But such an examining board as is contemplated by Mr. Errington's Bill will deter them from selecting the medical profession, inasmuch as they will see that they shall never be able to pass that barrier, and that, as you say, if they tried it and failed, the public would reject them from private practice as incompetent. Why, Sir, this is the very thing we want. A., a well qualified and competent man, cannot ask *for* his proper fee, because B., a qualified ignoramus, will attend for half the amount. But let us reduce the numbers of the profession by preventing any others of the stamp of B. from entering it by any bye-paths, and our fees in a few years will double themselves. Nor will the Corporations suffer in consequence; for the higher rewards of the profession will make diplomas worth more money, and will cause the services of teachers and examiners to command a higher pecuniary value.

No doubt the root of the depreciation of professional services lies, as you say, in a faulty method of medical education, for which the General Medical Council are responsible; but the Bill will undoubtedly touch the very root of the evil, for "Respice finem" is the student's guiding motto, and his studies are rigidly ruled by the examinations he has to pass in order to get into practice. The General Medical Council has done little for us, and will never do more as long as its members are guardians chiefly of the interests of the Corporations. This Bill will, I believe, put us at once on a better footing, and do more for us in five years than the General Medical Council would accomplish in fifty. The only question to my mind is, Ought the General Medical Council to be allowed to nominate the examiners? Might not this duty be discharged much more satisfactorily in the interests of the public, and with much more chance of a high standard of requirements, by the Local Government Boards of the respective countries?

Yours truly,

ISAAC ASHE, M.D. T.C.D.

State Asylum, Dundrum, Dublin, Feb. 25th, 1878.

SANITARY STATE OF STROUD.

THE zymotic death-rate of Stroud calls for public attention and stringent reform. While the percentage from this cause amounted to 4·5 and 4·4 in 1874 and 1875 on the total deaths in eighteen large towns, the percentage in Stroud equalled 5·08 and 5·2 respectively. But during the last two years an enormous increase for the worse has taken place. In 1876 the percentage rose to 9·2, and in 1877 to 12·7. Scarlet fever was the principal disease that proved fatal. The population of the district included in these calculations is estimated at 7350. The general birth- and death-rates are nearly on an average with those of all England. With a porous soil, good drainage, plenty of water, freedom from the numerous manufactories or crowded courts and alleys which corrupt the air of large towns, Stroud should be remarkably exempt from, instead of particularly susceptible to, zymotic disease. This disgraceful state of affairs is attributed by the local medical officer to the fact that "persons we call intelligent" violate the laws of health, and think more of personal convenience than the public good. The morbid desire to visit the bodies of those who are dying or dead from infectious diseases, the mingling of the healthy with the sick, secretiveness and the objections raised against disinfection, all account for the spread of fever. Under these circumstances the medical officer pleads in favour of compulsory legislation, and demands that all persons suffering from infectious disease should be forced to report themselves to the sanitary authorities.

Lex.—We fear that no proceedings can be taken under the Medical Acts, unless there is some assumption of titles. Had the patient been one of the lower animals, the Act for the Prevention of Cruelty might have protected him, or given a basis for proceedings against the phlebotomist.

The Secretary, Manchester Medical Society.—We have only room for *brief* abstracts of the papers read.

VACCINATION DIRECT FROM THE CALF.

To the Editor of THE LANCET.

SIR,—Vaccine lymph as used in the days of Jenner being in close relationship to its original source, the heifer was believed by him to afford a perfect protection against small-pox. This lymph has not been generally renewed for eighty years, and in consequence has gradually deteriorated in quality, as is proved by its comparative inefficiency at the present day, as witnessed by the ever-recurring epidemics of small-pox.

That vaccine lymph derived from human beings *may* communicate syphilis all now admit, and that serious and even fatal erysipelas may also arise from its use is also admitted.

Lymph derived from the bovine race is entirely free from these objections. It cannot possibly convey syphilis, and it has never, when properly obtained and used, been known to cause erysipelas. Moreover, its efficiency is so complete that no instance has been recorded of any individual so vaccinated having ever taken small-pox afterwards.

Vaccination direct from the calf has been the national system in Belgium during the last ten years, while one million supplies of bovine lymph have been disposed of by Dr. Henry Martin, of Boston, U.S., during the last six years. These facts speak for themselves.

The success with calf lymph is about 99 per cent. in cases of primary vaccination, and our success has been about 75 per cent. in secondary vaccinations.

We have successfully vaccinated calves during the last eleven months with pure lymph derived from other calves, and never from small-pox, as some ignorantly suppose; and having visited Belgium, and with Dr. Warlomont's most courteous assistance, made ourselves intimately acquainted with the minute details of the process, we are prepared to guarantee the profession a continuous supply of fresh calf lymph in points and tubes, as advertised in your journal.

We have this day opened an office at 264, Oxford-street, and we invite medical men to visit us there daily, except Saturday, from two to three o'clock, at which hour cases may be inspected.

We would also remind medical men that the anti-vaccination movement is daily gaining strength, and that its only argument, the danger of erysipelas and syphilis, is at once answered by the use of calf lymph.

Method of vaccinating.—We recommend a few punctures or scratches to be made, when the point, being moistened, is rubbed over these marks, the skin being slightly stretched.

We are, Sir, yours truly,

GEORGE WYLD, M.D. Edin.

Feb. 5th, 1878. THOMAS WILSON, L.R.C.P. Edin.

Mr. William Phelps.—The first question is entirely a matter of contract or custom, to be decided after inquiry of the authorities of the club and of other clubs. As regards the second question, overseers can give an order only in cases of *sudden* and *urgent* necessity, and the medical officer is only required to attend upon the overseer's order in such cases. If he attend upon any such order, and the case be not of that nature, the medical officer may have a claim against the overseer, but has none against the guardians. We think the medical officer in this case would have a claim against the overseer.

Constant Reader.—The book referred to is the second half, called vol. ii., of Billroth's Surgical Pathology, well known in this country for many years through the medium of the excellent American translation. The Council of the Sydenham Society has always shown a want of acquaintance with foreign literature, except what is brought under its notice as English translations, of which they at once proceed to issue re-translations.

Mr. G. N. Adams.—The article "Croup" in Reynolds's System of Medicine, vol. i.

"MERMAID'S-YARD."

DR. BARCLAY, medical officer of health for Chelsea, has reported to the vestry on the insanitary condition of Mermaid's-yard. It is difficult to believe that such a state of things as that revealed in Dr. Barclay's report can have been permitted to go on for years without awakening public indignation at the apathy of the sanitary authority of the parish. We will let Dr. Barclay describe the yard in his own words:—

"It has been for some years past the worst court in the neighbourhood in which it is situated. Originally very faulty in construction, it has always been difficult to keep it in a moderately healthy condition. Up till this time the Metropolitan Board has not been prepared to deal with it under the Artisans and Labourers' Dwellings Improvement Act of 1875, and its present condition is such as cannot be effectually met by the issue of notices. Within the last two years part of the court has been cut off, and with it a great part of the privy accommodation, leaving only two watercloseets for the inmates of seventeen houses. Their condition is naturally excessively filthy. Placed over these abominations is the only cistern for the supply of all the drinking, cooking, and washing water of the same seventeen houses. The pavement in front is very imperfect and broken, and in all weathers wet and dirty, like the interior of the closets. The paving of the whole yard has, in course of long periods of neglect, become so imperfect that it is only a series of puddles in wet weather. The cottages themselves are mostly dirty and dilapidated. Originally constructed without proper ventilation, the evil has been increased by nailing up all the top sashes of the windows. The back walls of most of the cottages are damp, and in some the rain enters through the roof. I am therefore of opinion that the houses are, in their present state, unfit for human habitation, and I hereby certify the same to the vestry, with a view to their taking proceedings, if they shall see fit, under Mr. Torrens Act."

Dr. Bernard O'Connor.—The paper has been received, and is marked for insertion.

Anglo-Indian.—Sir Thomas Watson's Practice of Physic.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir W. Jenner, London; Dr. G. Johnson, London; Dr. Handfield Jones, London; Dr. Murchison; Dr. J. Williams, London; Mr. G. Fleming, London; Mr. G. Brown, Islington; Mr. Lattey, London; Dr. Day, Stafford; Mr. Macdonald, Broughty Ferry; Mr. W. Brown, Carlisle; Mr. Cane, Nottingham; Mr. Shore, Woolwich; Mr. Illingworth, Peterborough; Mr. Taylor, Emsworth; Dr. Fergus, Marlborough; Mr. Hall, Cambridge; Dr. Gill, Folkestone; Dr. Ashe, Dundrum; Dr. R. S. Smith, Clifton; Mr. W. Phillips, London; Mr. Craigie, London; Dr. Kebbell, Brighton; Mr. Thornton, London; Dr. Phillips, Reading; Mr. Ash, Penroses; Dr. Hitchman, Liverpool; Dr. Anderson, Cramlington; Dr. Cassells, Glasgow; Dr. Cobbold, London; Dr. Hardcastle, London; Dr. Sandford, Hereford; Dr. Irvine, Glasgow; Mr. Parkinson, Whittinghan; Mr. Livy, Bolton; Mr. Calvert, Hull; Mr. Faircloth, Newmarket; Mr. Bousfield, Lichfield; Messrs. Lockie & Co., Bromley; Dr. Wallace, Greenock; Dr. Williams, Duppas Hill; Dr. Stowers, Tulse Hill; Mr. Maule, Auchterarder; Mr. Dowdeswell, Wimbledon; Dr. Holland, Ampthill; Mr. Roberts, Uxbridge; Dr. Beveridge, Aberdeen; Mr. Treves, Wirksworth; Mr. Whitehead, London; Dr. Miller, Glasgow; Mr. Marriott, London; Dr. Haywood, Liverpool; Mr. Watt, Hovingham; Messrs. Allen & Son, Liverpool; Mr. Austen, Tongue; Dr. Elliott, Hull; Mr. Hanky, Worksop; Mr. W. W. Jones, London; Dr. Wallace, Parsonstown; Mr. Max Greger, London; Mr. Horner, London; Dr. Poinsot, Bordeaux; Mr. Cripps, London; Mr. Foster; Dr. Tatham; Dr. Hill; Dr. Clements, Belfast; Dr. Forbes; Dr. Baker, Birkenhead; Dr. Burdett, Greenwich; Dr. Huetar, Griefswald; Dr. Barton, Fulbeck; Dr. Ritchie, Otley; Mr. Blackburn, Barnsley; Dr. Guppy, Falmouth; Dr. Hanley; Mr. Reeves; Mr. Brown, Manchester; Dr. Taylor, Liverpool; Dr. Brown, Bacup; Dr. Saunders, Cosham; Dr. Paulson, Mount Sorrell; Mr. Beach; Dr. Berryman, St. Austell; Mr. Hargreaves; Dr. Carey, Guernsey; Dr. Bradburn, Trinidad; Dr. Lloyd, Cheswardine; Mr. Green; Mr. Hunt; Dr. Brown, Battersea; Dr. Garneys, Repton; Dr. Roberts, Denbigh; Mr. Walters, Faringdon; Dr. Hopgood, Sunderland; M.D.; R. A. B.; Ignoramus; A Student of Charing-cross; A Subscriber; Not a Vegetarian; C. J. B.; Analytical Chemist; C.; Hygiene; The Sanitary Institute; A. K. C., London; H. M. D.; The Registrar-General of Edinburgh; F. W. S.; Ad Omnia Prompta; M. B.; One who desires to see the Department Deficient; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Maguire, Stony Stratford; Mr. Phillips, London; Mr. Bromley, Nottingham; Mr. Rawlins, Highgate; Mr. Thomas, Narberth; Mr. Binns, Middlesborough; Mr. Poole, Dudley; Mr. Elliott, Carlisle; Mrs. Johnstone, Greenock; Messrs. Asher & Co., Guildford; Mr. Scott, Snaresbrook; Dr. Stephens, Hounslow; Mr. Walford, Ramsgate; Mr. Lawrance, Hereford; Dr. Johnston, Brotton; Dr. Robert, Llanfair; Mr. Arthur, Edinburgh; Dr. FitzGerald, Ipstones; Mr. Hatton; Mr. Collins; Mr. Curtis, Petersfield; Mr. Binks; Mr. Lewis; Dr. Vawdrey, Hayle; Mr. Wilson; Mr. Steel; Dr. Crichton; Mr. Samson; Dr. Brady, Derby; Mr. Ellis; Dr. Morris, Fareham; Dr. Hughes; Medicus, Sheffield; Alpha, Chester-le-Street; Pareira; L.R.C.P.; Lantern; X. Y. Z., Greenwich; A. E.; Flatus; M.D.; Surgeon, Plymouth; B. A.; H. B.; W. M., Wigan; L. C.; Femur; O. P.; P. L.; S. C. B., Alfreton; R. W. C.; Medicus.

Lincoln Gazette, Shield, Middlesex County Times, Edinburgh Courant, Shields Daily Gazette, Jarrow Guardian, Reading Observer, Financial Opinion, Sunderland Daily Echo, &c., have been received.

Medical Diary for the ensuing Week.

Monday, March 4.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 1½ P.M.; on Wednesday, 2 P.M.; on Thursday, 1½ P.M.; and on Saturday, 2½ P.M.
ROYAL INSTITUTION.—2 P.M. General Monthly Meeting.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."
MEDICAL SOCIETY OF LONDON.—7½ P.M.—Annual Meeting.—Election of Officers and Council; Ballot closes at 8½ P.M.—Dr. Howard (U.S.A.) will give a demonstration of "The Direct Method of Artificial Respiration."—Mr. R. Brudenell Carter, "On Artificial Light in relation to the comfort and well-being of the Eyes."

Tuesday, March 5.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Garrod, "On the Protoplasmic Theory of Life, and its bearing on Physiology."
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Dilatation of the Heart and Aorta from old Spinal Disease; "Lymph Scrotum"; Worms in the Heart and Œsophagus of a Dog; Drawing of a rare form of Psoriasis; Drawing of a Case of Nævus complicated with Molluscum; Case of Hypertrophic Lupus; Renal Calculi of peculiar constitution; Spontaneous Disintegration of Calculi; Polypus from the Antrum and Orbit; Colloid Cancer of the Breast; Section of Tumour from the Pectoral Region of a Man, aged eighty-one; &c. &c.

Wednesday, March 6.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens and Instruments: Dr. Hayes: Tube for Intra-uterine Injection of Solution of Perchloride of Iron. Dr. Galabin: Metrotome. Dr. John Williams: Uterus with portion of Placenta, three weeks after Labour.—Papers: Dr. Matthews Duncan, "On Traction by the Lower Jaw in Head-last Cases."—Dr. George Roper, "On a Case of Protracted Labour in which the Forceps was typically indicated."
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. A. Schulze, "On an easy and simple Method of resolving the finest lined Diatomaceous Tests." Mr. C. Stewart, "On a supposed New Coral (Stylaster)."

Thursday, March 7.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On the Chemistry of the Organic World."
LINNEAN SOCIETY.—8 P.M. Dr. Patrick Manson, "On the Development of Filaria Sanguinis Hominis, and on the Mosquito considered as an intermediate Host."—Dr. T. Spencer Cobbold, "On the Life History of Filaria Bancrofti as explained by the Discoveries of Wucherer, Lewis, Bancroft, Manson, and others."
HARVEIAN SOCIETY.—8 P.M. Casual Communications.—Dr. T. S. Downe, "On the Treatment of Syphilitic Disease of the Nervous System."

Friday, March 8.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."
ROYAL INSTITUTION.—8 P.M. Weekly Meeting.—9 P.M. Professor Goldwin Smith, "On the Influence of Geographical Circumstances on Political Character."
QUEKETT MICROSCOPICAL CLUB.—8 P.M.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Hulke: "Large Aneurism of the Left Subclavian and Axillary Artery treated by Rest and a very limited Diet" (living specimen).—Dr. Broadbent: (1) "Sudden Death from Effusion into the Pleural Cavity, without Paracentesis." (2) "Unusually rapid Effusion into the Pleural Cavity at the age of seventy-six; Paracentesis; Recovery."—Dr. F. Taylor: "Unilateral Atrophy, with Muscular Spasm (Athetosis?)" (living specimen).

Saturday, March 9.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. R. Bosworth Smith, "On Carthage and the Carthaginians."